DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

August 5 1993

MEMORANDUM TO: F. DALE ROBERTSON, CHIEF, FS

FROM: Mike Espy
Secretary

SUBJECT: Approval of Massachusetts Assessment of Need, Eligibility Criteria and Five Forest Legacy Areas under the Forest Legacy Program.

Pursuant to Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990 (Public Law 101-624:104 stat. 3359), I hereby approve the establishment of a Forest Legacy Program in the Commonwealth of Massachusetts.

The Assessment of Need approved by the State Lead Agency, the Bureau of Forest Development of the Division of Forests and Parks of the Massachusetts Department of Environmental Management, is hereby approved as fulfilling the requirements set forth in the Law and implementation guidelines.

The Eligibility Criteria for forest lands qualifying for the Forest Legacy Program, as set forth in the Massachusetts Assessment of Need, are hereby approved.

The five (5) proposed Forest Legacy Areas, as described in the Massachusetts Assessment of Need, are hereby instituted as approved Forest Legacy Areas. The five (5) areas are: Stockbridge Yokun Ridge Reserve, Estabrook Woods, Holyoke Range and Western Valley Watersheds Subunits of the Connecticut Valley, Phase I and Phase II Subunits of the North Quabbin Corridor, and the Nashua River Greenway.

Makes conservation easement and land acquisitions possible utilizing FY 1993 funds and future funds as may be available.

Cons: By adding a new State to the program, there will be increased competition for acquisition of funds.

Option 2: Disapprove the Massachusetts AON, Eligibility Criteria, and five FLAs.

Pros: None

Cons: Damages Department and Forest Service relationship with State and interest groups supporting forest Legacy Program in Massachusetts.

May cause concern with Members of Congress that the Forest Legacy Program is unnecessarily bureaucratic and time-consuming.

Massachusetts may decide not to participate in the Forest Legacy Program rather than do additional work on their Assessment of Need.

RECOMMENTATION:

Approve the Massachusetts AON, Eligibility Criteria, and five FLAs. Should you agree with this recommendation, we have enclosed a memorandum which could be used to make the requested designation.

If you have any questions, please feel free to contact Tony Dorrell, Director, Cooperative Forest Staff of 205-1389.

DECISION BY THE SECRETARY

Approve _____ Date _____

Disapprove _____

Discuss with me _____

Reviewed by: _____

Enclosure

United States Department of Agriculture | Forest Service | Washington Office | 14th & Independence SW
P.O. Box 96090
Washington, D.C. 20090-6090

.

Date: MAY 27 1993

DECISION MEMORANDUM FOR THE SECRETARY

THRU: James R. Lyons
Assistant Secretary, NRE

FROM: F. Dale Robertson
Chief

SUBJECT: Approval of Massachusetts Forest Legacy Program Assessment of Need, Eligibility Criteria, and Five Forest Legacy Areas.

ISSUE:

Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990 (Public Law 101-624:104 stat. 3359) authorizes the Secretary to implement the Forest Legacy Program and to select appropriate areas to include in the program. This law and the Forest Legacy Program Implementation Guidelines of June 4, 1992, prepared by the Forest Service require the Secretary's approval of a State's assessment of Need (AON), Eligibility Criteria, and designation of Forest Legacy Area(s) (FLA). This memorandum documents the Secretary's approval of the Massachusetts AON, Eligibility Criteria, and five FLAs (Stockbridge Yokun Ridge Reserve, Estabrook Woods, Holyoke Range and Western Valley Watersheds Subunits of the Connecticut Valley, Phase I and Phase II Subunits of the North Quabbin Corridor, and the Nashua River Greenway).

BACKGROUND:

The Forest Legacy Program began with an Initial Program in the Northern Forest Lands Study States of Maine, New Hampshire, Vermont, and New York. The Initial Program also included Washington and Massachusetts with the stipulation that they complete an AON. Massachusetts began their AON in 1991 before the Forest Legacy Program Implementation Guidelines were finalized. They prepared two drafts in 1992 (March and October) and submitted the final version in May 1993.

OPTIONS:

Option 1: Approve the Massachusetts AON, Eligibility Criteria, and five FLAs.

Pros: Allows another State to participate in the Forest Legacy Program.

Furthers the Forest Legacy Program objectives of preventing environmentally important forest lands from being converted to nonforest uses.

Fulfills a commitment to Massachuetts and the public.

PREFACE

Since early times, Massachusetts forests have been a major resource to the Commonwealth, and have constituted an inter-generational legacy. Today, despite being the third most densely populated state in the nation, sixty-four percent of Massachusetts remains forested. However, because of increasing population and demand for land for development, these forests have been fragmented and are threatened by conversion to non-forest users.

The *Forest Legacy Needs Assessment for Massachusetts* provides a comprehensive, long range process to identify and protect privately-owned woodlands that are under threat of fragmentation and conversion to non-forest uses.

As appropriate, periodic review and revision to this assessment will be made to meet the future needs of the forest-using citizens of the Commonwealth of Massachusetts.

_____

_____
Warren E. Archey, Chief Forester
Bureau of Forest Development
Division of Forests and Parks
Mass. Department of Environmental Management

Date: May 10, 1993

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

The Massachusetts Forest Legacy Committee is greatly indebted to Christina M. Petersen for her permission to use narrative directly from *Forest Resources of Massachusetts* in providing the sections dealing with the history and future of Massachusetts' forests. The material proved not only to be entirely relevant, but also provided insight and vision, thus allowing direct utility of the findings in development of the assessment.

The committee, too, is greatly indebted to Thomas Quink, Program Manager, Southern New England Forest Legacy Program, for his untiring assistance and encouragement in program development, coordination and publication of the assessment document.

Grateful appreciation is also extended to William Rivers, State Lands Management Forester, for his significant contributions to descriptions and cartographic depiction of Forest Legacy Areas.

FOREST LEGACY NEEDS ASSESSMENT
FOR MASSACHUSETTS

I. INTROCUTION

The forests of Massachusetts are an invaluable resource providing an astonishing array of benefits, including recreational opportunities, clean water, wood products, and thriving wildlife populations. Our forests and the resources they provide currently face many challenges, including maintaining a viable forest products industry and sufficient economic incentive for landowners to retain and manage forest land. For many reasons, it is in the best interests of the Commonwealth to encourage the conservation and management of its forests.

Prompted by concerns that land development continues to seriously fragment forest land ownership inurbanized states like Massachusetts, the United States Congress created a "Forest Legacy Program" in the 1990 Farm Bill. The programs purpose is to identify and protect environmentally important privately-owned forest lands threatened with conservation to non-forest uses, and to authorize federal (U.S.D.A. Forest Service) purchase of conservation easements on forest land as a way of slowing such conversions. By retaining these lands in traditional forest uses (timber harvesting, extensive recreation) those lands can yield positive future benefits in economic stability and employment. Also tourism depends directly on the aesthetics of the Massachusetts landscape, again relating economic health and the condition of the environment.

To be eligible to participate in the Forest Legacy Program, the Commonwealth of Massachusetts must prepare a statewide assessment of need that: documents the need for a state Forest Legacy Program, identifies those areas and delineates the boundaries of forest areas meeting the eligibility requirements for designation as Forest Legacy Areas, and recommends those areas to the Forest Service for inclusion in the Forest Legacy Program. Meeting these requirements is the goal of Massachusetts Forest Legacy Committee and objectives include specifically recommended Forest Legacy Areas for Phase I and a single Legacy Area designation for Fiscal Year 1992. That goal and those objectives are met by the contents of this document.

II. MASSACHUSETTS FORESTS: PAST AND PRESENT

A. Massachusetts Forest History

When one walks in the woodlands of Massachusetts, it is easy to get the feeling that the forest around you has not changed for centuries. While it is true that forests change very slowly in relation to our lives, they do make up a dynamic environment. The forests of Massachusetts have been altered by both natural disturbances and human influences for hundreds of year.

Hurricanes have played a major role in the development of Massachusetts' forests. Since 1635, four major hurricanes have swept through the state, leaving a changed forest in their wake. Before English settlers arrived, native Indian tribes manipulated the forest to meet their needs. They burned the forest floor to stimulate the brushy growth favored by game species, cleared land around major lakes and rivers for settlements, and used wood for their primary cooking fuel. Because the native population was so small, the forests of Massachusetts were largely unaffected by these practices.

1. The first forest

When European settlers arrived, they found forests dominated by red oak, white pine and hemlock. Elk, caribou, moose, mountain lion and timber wolves roamed the woodlands. Deer, quail, skunk, grouse and hare were largely confined to settlement areas or younger forests that had been affected by natural disturbances.

For the next 200 years, the forests of Massachusetts were cut to establish farms and to harvest wood for houses, barns, forts, furniture, fuel, charcoal and potash. By the early 1800s, only 20% of the land in Massachusetts was forested. Elk, caribou and mountain lion had disappeared. Hunting and trapping decimated wild turkey and beaver. The removal of the forest canopy encouraged small, brush growth favored by deer, grouse and hare.

During the mid 1800s, reports of fertile farmland to the west, the opening of the Erie Canal, the California Gold Rush, and the offer of free land to Civil War veterans were situations too tempting to the Massachusetts farmer to refuse. Many abandoned their farms and moved west.

2. The second forest

Trees that had seed capable of beign established in grassy pastures, such as white pine and grey birch, began to form a forest in Massachusetts. By the early 1900;s, the earliest farmland to be abandoned had grown into pine stands that were ready to be harvested. The opening of the Panama Canal and improved railroads expanded the marketplace from New England to the rest of the nation and the world. Containers were needed to ship commercial goods, and the white pine forests of Massachusetts provided wood for the manufacture of shipping crates. The stage was set for the heaviest commercial exploitation of the Commonwealth's forests to date. In 1908, at the peak of the "boxboard boom", the sawmills of Massachusetts had produced almost 400 million feet of lumber. Today, production is less than half of that.

After the pine was removed, the young oaks and maples already established grew quickly to form the next forest. This was a great boon to deer, and in 1910 a century-long deer hunting ban was lifted. Populations of black bear, wild turkey, beaver and grouse were still in decline.

3. The third forest

During the turn of the century, as Massachusetts' second forest was undergoing extensive cutting, public concern over the fate of the Commonwealth's forest resources began to grow. The Trustees of Reservations and the Massachusetts Forest and Park Association were formed during this time. Public acquisition of large parcels of land including Mt. Greylock, Middlesex Fells and the Blue Hills Reservations also began. In 1908, the legislature created the office of the State Forrester. A State Forest Commission was established and in 1915, the first state forest, the Otter River State Forest in Winchendon and Templeton, was purchased.

Insects, diseases, and natural disasters played a large role in changing the composition of the forest at this time. A fungus imported from England introduced the chestnut blight and within 15 years that tree was virtually eliminated. This tree has been one of the primary components of the Massachusetts forest, providing durable lumber and food for both people and wildlife, especially wild turkeys, whose population declined afterwards. Dutch Elm disease was also established in the early 1900s, and has slowly killed most American elms, the state tree of Massachusetts. Gypsy moths reached epidemic proportions at this time, defoliating thousands of acres of white and red oak. The Great Hurricane of 1938 roared through Massachusetts and blew down 880,000,000 board feet of timber, almost eight times what is currently harvested annually.

The wood products industry languished during the Depression. Mobilization for the war effort brought renewed activity for forest industries, but generally this was aperiod of low exploitation of Massachusetts' forests. The hardwood stands that were established after the white pinew as cut were not yet mature and the abundance of natural gas and oil made cordwood less popular.

During this time, social shifts in our population were taking place that would also affect the forests. During the 1940s and 1950s, urban dwellers began leaving cities in large numbers. Suburban developments cut into forest land. As farming became less profitable, many farmers sold their cropland and forests to developers and urban dwellers looking for a rural experience. Forest land was chopped into smaller parcels, making management less practical. The new country dweller had different uses and priorities for forest land and woodlots became more important as sources of recreation than as income. Since 85% of our commercial forest land is owned by these non-industrial private owners, this change in outlook and lifestyles has had a significant impact n our forests and the industries that use them.

The forests of Massachusetts have again reached maturity, providing us with quiet woodlands, scenic vistas, thriving wildlife populations, a timber resource for our wood industry, and beautiful recreational opportunities. Managing our woodlands to provide us with all these amenities and a healthy forest is the challenge that we now face.

4. Forest history preserved

No cultural history better documents the three Massachusetts forest areas than the renowned Fisher Museum at the Harvard Forest in Petersham. Photographic archives, scientific data and other records provide a rich resource for the forestry research community. Perhaps the best known resource is the unique Harvard Forest dioramas that depict the impact of European settlers on the Region's forests over the course of three centuries.

B. The Forest Resource Base

1. Forest Ownership

Although Massachusetts is often thought of as an urban state, 64% of the land, or 3,225,200 acres, is forested. Maps (Appendix A) depict forest distribution, percentages and per capita cover. Historical data are depicted in figure 1. Of those forested areas, 2.9 million are classified as timberland, or land that is fertile and accessible enough to produce wood as crop and is not withdrawn from timber harvesting by regulation. Who owns these 2.9 million acres of land? Eighty-four percent of timberland is privately owned by individuals, farmers, corporate owners and the forest industry. Only 16% is publicly owned, by either the state, counties, unicipalities, or the Federal Government (figure 2).

The number of individual landowners in Massachusetts is increasing dramatically. In 1972 the Forest Service estimated that there were 103,900 forest landowners in the Commonwealth. By 1984 that number had jumped to 235,200 – greater than a two-fold increase! Most of these new landowners bought parcels ranging in size from one to nine acres. During the same period, 25% of the parcels ranging insize from 100-199 acres were sold. Thus, many of the larger forested tracts are being broken up into smaller parcels (figure 3).

Eighty percent of forest landowners in Massachusetts are young professionals, managers, craftsmen and retired people. The difference in acreage in relation to the numbers of owners is interesting to note. Although professionals and craftsman make up 50% of forest landowners, they own only 24% of the acreage. They are included in the large group of owners that has purchased land in the 1-9 acre category since 1972. A group of owners that have acquired large acreages is included in "other". This group is composed of a mix of business relationships – partnerships, trusts and clubs.

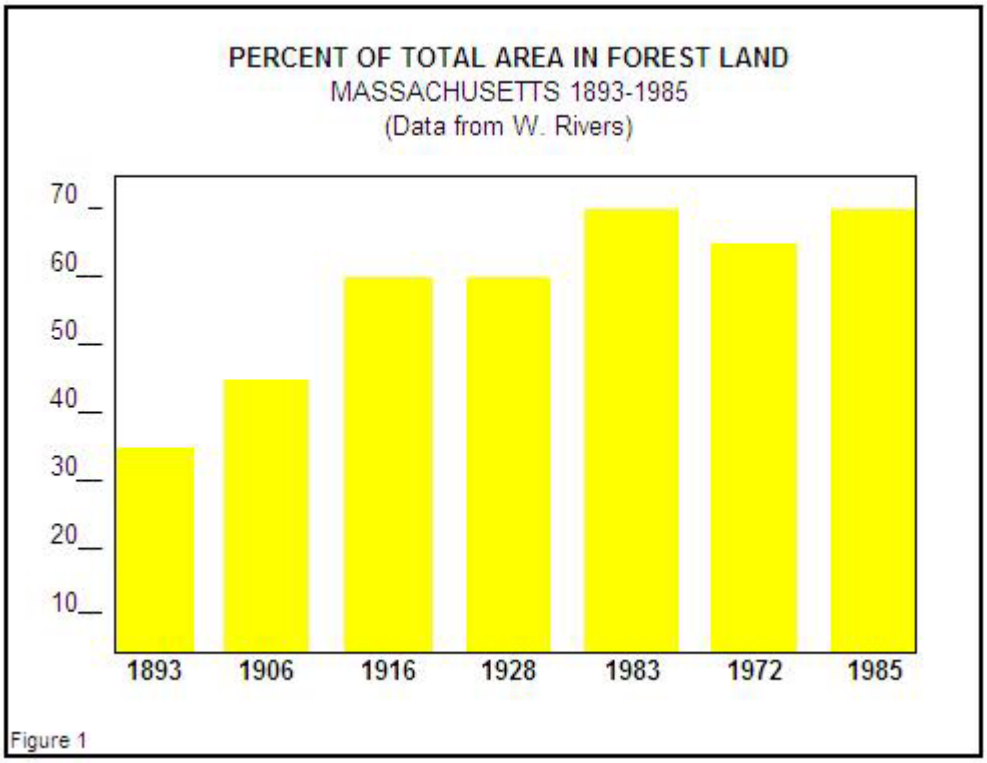


Figure 1

Sixteen percent of timberland in Massachusetts is publicly owned. The Department of Environmental Management, Division of Forests and Parks, is the largest single landholder in the state, with 263,485 acres in 136 forests, parks, reservations and beaches. In fact, DEM's forest and park system is the sixth largest in the United States! The Metropolitan District Commission manages 85,000 forested acres surrounding the Quabbin, Wachusett and Sudbury Reservoirs and also manages ten reservations around the greater Boston area. The Massachusetts Division of Fisheries and Wildlife manages 64,182 acres of wildlife management areas. Municipalities in the state own approximately 288,000 acres, including Conservation Commission lands, watershed lands, recreational lands and town forests.

Private, non-profit organizations own 132,051 acres of forest land in Massachusetts. The Trustees of Reservations, The Nature Conservancy, the Massachusetts Audubon Society, Land Conservation Trusts, and Boy Scout, Girl Scout and 4-H camps are some of the groups that make up this non-profit sector.

2. Forest composition

Massachusetts' forests lie in a transition zone between the pure coniferous woodlands of the north and the mixed deciduous woodlands of the mid-Atlantic states. A long growing season, well-distributed rainfall and fertile soils have resulted in forests that contain a rich mixture of many species. White pine, hemlock, oak, red maple and hickory occur throughout the Commonwealth, while birch and sugar maple are concentrated in the fertile soils of western Massachusetts. There are pockets of red spruce at high elevations in the Berkshire mountains. Pitch pine grows with oaks on the dry, sandy soils of Cape Cod and the Islands.

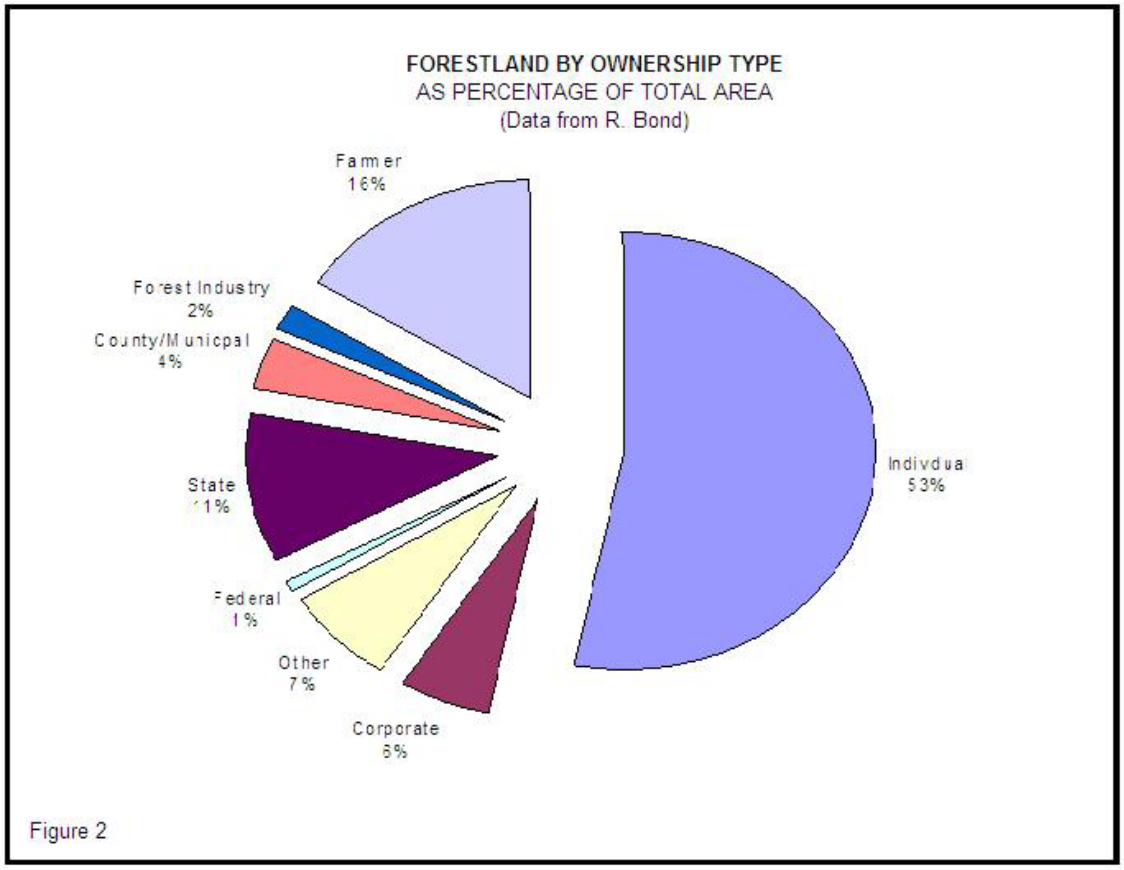


Figure 2

Forest Service surveys have revealed substantial increases in timber growth since 1972, especially in the sawtimber size class (trees greater than eight inches in diameter. Volume in the sawtimber size class nearly doubled for softwoods (wood produced by coniferous trees) and more than doubled for hardwoods (wood produced by deciduous trees). Thus, our forests not only have greater volume, but it is in larger trees. This indicates that we have been conservative in harvesting our timber resource. Indeed, the Forest Service survey found that removal by harvesting is extremely conservative in Massachusetts. Growth in our forests exceed removals by 3 to 1!

Unfortunately, the Forest Service found that the volume increase is in lower-value species and lower quality trees. For example, red maple, considered a low-value species, jumped from 7% of the total board foot volume in 1972 to 13% in 1984. During that same time, the quality of red maple sawlogs declined, leading to speculation that the best trees are being removed from the forests, leaving poor growing stock behind.

Of the 3.2 million acres of forests in Massachusetts, nearly 2.2 million acres (66.9%) are classified as "prime". These prime woodlands have excellent to good potential for profitable forest management. Classification of potential productivity, when coupled with other relevant information, enables landowners and resource professionals to make judicious land use decisions. The system may be used in determining the relative timber value for forest land investment and management decisions in Forest Legacy Areas.

3. Forest wildlife

Most fluctuations inwildlife populations can be traced to habitat change. As the forests of the Commonwealth shifted to open farmland and to a forest containing all ages of trees, wildlife populations have changed with it. Due to the variety of coastal, inland, farm and woodland habitats and rich mixcture of woodland special, Massachusetts has a diverse array of wildlife.

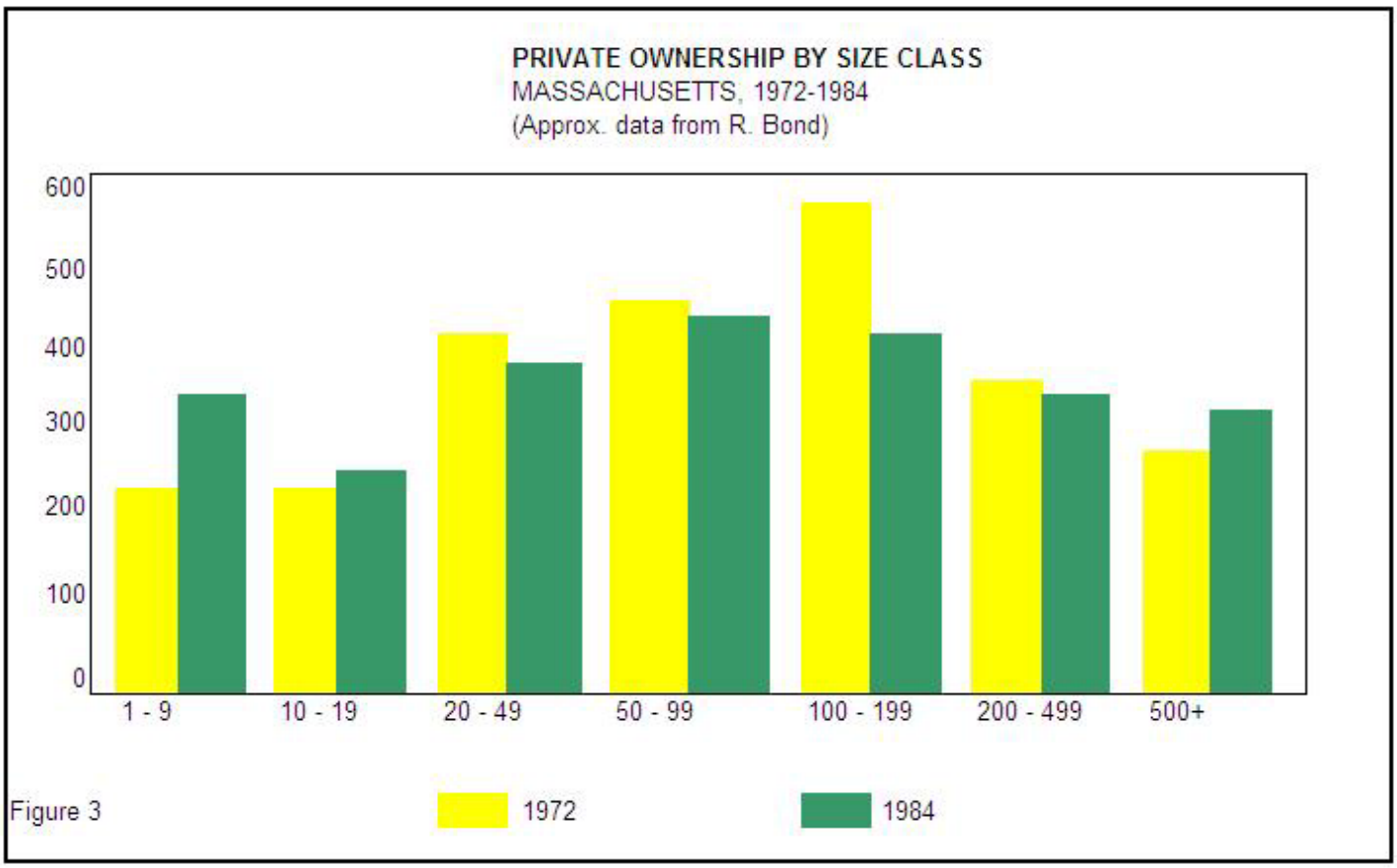


Figure 3

Massachusetts forest lands provide habitat for at least 169 species of birds. The northern hardwood forest provides an abundant and varied habitat for approximately 80-100 breeding species, while the pine and oak forests contain fewer species. Wooded wetlands also support a diverse birdlife, especially if they contain water courses with brushy or marshy edges.

The varied terrain of thickets, woods and abandoned fields in the Commonwealth provide an ideal habitat for mammals. More than 50 species of terrestrial mammals regularly occur in Massachusetts. Our largest resident mammal, the black bear, has become abundant during the last 5 to 10 years, adapting to populated regions west of the Connecticut river. The eastern coyote and beaver have also become common in recent times, inhabiting the brushy edges of fields, hardwood forests and wetlands. Other species of wildlife in the Commonwealth who are affected by changes in forest land include amphibians, reptiles, and freshwater fish.

4. Forested wetlands

Forested wetland occupy poorly drained areas that are subject to flooding during periods of high rainfall. These areas are often overlooked because they lack surface water for much of the year. Forested wetlands provide important functions such as flood and sediment control, ground an surface water purification, and fish and wildlife habitat.

Red maple swamps are common throughout the Commonwealth. Other types of forested wetlands in Massachusetts include floodplain forests found along major rivers and streams, black spruce bogs, Atlantic white-cedar swamps and vernal pools. Vernal pools are small, temporary bodies of freshwater, filled during wet spring and autumn months, and dry during the summer.

Wildlife that favor forested wetlands include the red-shouldered hawk, wood duck, spotted salamander, black bear, white-tailed deer and the beaver. Forested wetlands with a permanent source of water such as a small brook or stream provide ideal conditions for beavers who create an entire new habitat of dead trees and marshland. This habitat, in turn, will support a rich variety of wildlife.

5. Geology, topography and outstanding geologic features

The topography of Massachusetts was formed by glacial action that occurred 10 to 15 thousand years ago. As the glacier advanced and retreated it scraped away at existing land forms in some areas and deposited earth materials in others. Throughout Massachusetts there are numerous examples of landforms shaped by moving ice. Some features, such as drumlins and terminal and recessional moraines, were formed by glacial deposits. Other features, such as lakes, swamps and waterfalls were formed by debris that clogged valleys and dammed streams as the glacier retreated (examples in Appendix C).

According to information contained in the 1973 Statewide Comprehensive Outdoor Recreation Plan (SCORP), Massachusetts is divided into nine major physiographic provinces ranging from the Taconic Mountains in the west to the Boston Basin and Coastal Lowlands in the east. The Taconic Mountains form a mountain border with New York State. Elevations range from 1200 to 2800 feet. Mount Greylock, the state's highest peak (3491 feet) is located in the northeastern part of the Taconic province. The Taconics, although classified as hills, comprise the state's only "mountainous" region.

The Berkshire Valley, a long narrow lowland running north and south between the Taconic Mountains and the Berkshire Hills, includes both the Hoosic and Housatonic River valleys. The area, underlain by less resistant rock than surrounding regions, has eroded to provide a striking contrast with bordering hills.

The Western Highlands (Berkshire Hills), lie between the Berkshire and Connecticut valleys. The topography is rugged; elevations, which range from 700 to 2000 feet, are highest in the northwestern part of the province. The eastern section is dissected by major rivers which flow east and south to the Connecticut River.

The Connecticut Valley Lowland is a wedge shaped area extending north and south from southern Vermont to the Connecticut border. The lowland, about 20 miles wide at its greatest width, is located in a large geologic fault bordered by an escarpment on either side of the Valley. The topography is generally flat to rolling, except for a few ridges, such as Mt. Holyoke and Mt. Tom, which rise above the valley and are notable landmarks.

The Central Highlands are comprised of the eroded plateau east of the Connecticut Valley Lowland. The topography is generally rugged but more subdued than that of the Western Highlands. Elevations range from 700 to 1200 feet, except for monadnocks like Mt. Wachusett (2006 feet). The eastern part of the Highlands is bounded by an escarpment that slopes down to join the Coastal Hills.

The Coastal Hills region is the larges physiographic province in the state. Its low-lying plateau (elevations 200 to 700 feet) surrounds the Boston and Narragansett basins and borders the Coastal Lowlands. Best known of the Coastal Hills are the Blue Hills which rise to the south of Boston and dominate the skyline for miles around.

The Boston Basin is a very distinct topographic feature of the Massachusetts coast. Its lowlands (up to 150 feet in elevation) are surrounded by hills which rise abruptly from a ring around the entire basin. The major relief within the lowlands area is provided by a series of more than 50 drumlins.

The Narragansett Basin, similar to the Boston Basin, is a lowland (up to 200 feet in elevation) surrounded by the eastern uplands of the Coastal Hills.

The Coastal Lowlands include a narrow strip in the northeastern part of the state and all land south of Narragansett Basin, Cape Cod and the island of Nantucket sound. The landscape is flat to rolling and elevations range from sea level to 200 feet. Much of Cape Cod is still in the process of change; wind and wave action work to change the shape of the present landscape.

6. Cultural resources

Cultural resources include the remains of sites, structures or objects used by humans in the past and are protected in Massachusetts by the State Antiquities Act (M.G.L. Ch. 9, Sec. 26-27C). this Act, administered by the Massachusetts Historical Commission (MHC), established the State Register of Historic Places and Procedures to Protect the Historic and Archaeological Resources of the Commonwealth (950 CMR 71:00). According to the MHC, settlement has existed in Massachusetts for 11,000 years and patterns of use, abandonment and reuse, characterize the landscape.

Throughout all settlement periods, including prehistoric times, the most densely populated areas in the state have been the three lowland regions; the coastal lowlands, the Connecticut River Valley and the Housatonic Valley. The central and western uplands have consistently been less densely settled according to the MHC. While trade and industrial technology grew and flourished in the market centers and cities of the core lowland areas, agricultural activities dominated the upland areas. Settlers cleared the land for crops and pastures and depleted much of the forest across the state. Wood was valued for timber and fuel; white pine was especially prized for ship masts.

By the early to mid-1800's however, farming was no longer profitable and a period of farm abandonment ensued. With the decline of farming and logging, the abandoned fields reverted to forests and enfolded the stone walls and homesteads that dotted the landscape and now form part of our cultural heritage and record.

Many cultural resource sites are fragile and subject to a variety of negative impacts from diverse sources. Particularly vulnerable are sub-surface cultural resource sites that can be destroyed or damaged by soil mixing, compaction or erosion. Timber harvesting is recognized as a land disturbing activity that can cause these types of impacts. Primary impact mitigation strategies emphasize site identification, evaluation, avoidance and protection. While Chapter 132 forest cutting regulations do not specifically address cultural resources, they do include soil compaction and erosion measures which will help protect cultural resources during timber harvesting operations. More stringent and direct requirements, however, are included in the DEM cultural resource policy that affects forest management activities in the state forest and park system.

C. Demands on the Forest

The citizens of Massachusetts place great demands on our forest resources. We expect the forests to supply recreational opportunities, clean water, wildlife habitat and a healthy forest industry. The key to good land management is to meet these diverse needs on a sustained basis without sacrificing the integrity and the productive capacity of the resource base. Much work has been done to gather information on the forest resource, to assess our impacts on them and to prioritize policies and actions for resource conservation. These efforts will guide future conservation efforts in the state.

1. Recreation

Recreation on private and public land is the dominant use of Massachusetts forest land. Many private landowners permit the use of their land for hiking, nature study, horseback riding, corss-country skiing, snowmobiling, fishing and hunting. The Department of Environmental Management, Division of Forests and Parks, is the largest land manager of recreation in the state with 202 forests, parks, reservations and beaches covering 266,792 forested acres. During the 1988 season, over 12.9 million people used these areas, generating over $6.6 million in user fees. DEM manages state parks on a multiple-use basis. Many trails on our state forests are adjacent to past or active logging operations. Protected open space is depicted and long distance hiking trails are identified on maps in Appendix A.

Tourism is a two billion dollar industry in Massachusetts and much of the activities are related to our forests. According to the Office of Massachusetts Travel and Tourism, over 1.2 million travelers attend attractions in the fall in Massachusetts to view the colorful foliage. In the spring, a large number of tourists are drawn to the maple sugarhouses to watch the boiling of sap.

2. Water

The forest land of Massachusetts protects our water resources. The purity of water reaching a stream, its total amount, and the regularity of flow are all affected by the conditions of the surrounding forest, the soils in that forest, and other plant cover. Because trees also take up water,

available water from municipal watersheds in Massachusetts can be increased by decreasing the forest cover to a compatible balance of open and forested land. Harvesting timber from municipal watersheds also provides income to towns.

There are 150,000 acres of municipal water supply forest lands in Massachusetts. Since 1977, the University of Massachusetts Cooperative Extension has worked with 36 communities in the Commonwealth to establish 55,000 acres of municipal watershed under forest management. The participating communities have realized and additional water yield of approximately one billion gallons, valued at $235,000 annually, and have also benefited from timber sale income collectively in excess of $3.6 million. The Metropolitan District Commission, the agency responsible for meeting municipal Boston's water needs, also harvests timber from the 85,000 acres it controls. Proper harvesting methods insure clean water on all watersheds, while limited recreation facilities are maintained for the public. These areas are truly managed for multiple uses.

An Atlas of Massachusetts River Systems presents date and maps of Massachusetts river basins, depicting protected lands, man-made riverine features, canoe ratings and built-up areas. Prominent ecological features are also described for each river system. Dividing the landscape along physiographic boundaries, this publication represents a powerful tool for resource evaluation by natural delineation of ecosystemic influences. Appendix A contains maps delimiting major watersheds, wellhead protection areas and aquifiers.

3. Wildlife

Traditionally, wildlife managers have focused their attention on these species considered "consumptive", or those that are hunted or fished. To a large extent, wildlife managers in Massachusetts still focus primarily on these game species which include black bear, white-tailed deer, wild turkey, small mammals, ruffed grouse, waterfowl, and freshwater and marine fisheries, but increasing emphasis is being placed on management of non-game species and particularly on rare, threatened and endangered species and their habitat. Appendix A contains maps documenting occurrences of rare plants and animals.

During the 1985 hunting and fishing season, 469,200 people purchased licenses, permits, stamps and tags in the state, contributing over $12 million directly to the economy. The United States Fish and Wildlife Service estimated the value of fish and wildlife resources in Massachusetts in 1985 at approximately $550 million, based on expenditures for equipment, bait, guides, lodging, food, transportation and privilege fees.

It is difficult to assess the importance of more passive human activities associated with game and non-game wildlife species. The U.S. Fish and Wildlife Service defines these activities as observing, photographing, or feeding wildlife. In 1985, over 2.7 million people participated in these activities in the Commonwealth. That means that over 50% of our population participated in wildlife activities during 1985!

The Massachusetts Division of Fisheries and Wildlife is expanding acquisition of critical habitats to lands having high value for sustaining indigenous species biodiversity. This emphasis will serve not only the traditional hunting and fishing interests, but also a much broader spectrum of the recreating and environmentally concerned public.

Wildlife populations are entirely dependent on their habitat, so the link between wildlife and forests is a crucial one. Forests can be managed to enhance a certain wildlife species, such as the ruffed grouse or the white-tailed deer. Like most wildlife, these species prefer a variety of plant life that can provide food and cover. Planning a timber harvest with this diversity in mind can greatly enhance wildlife habitat. Some landowners harvest wood products from their woodlots to create specific wildlife habitat. By dong this, they are realizing multiple amenities from their forest – increased income and enhanced wildlife populations.

There are 338 inland wildlife species featured in *New England Wildlife: Habitat, Natural History and Distribution.* Regional range maps and species occurrence and use by habitat for each listed species allow the evaluation of potential habitat for native species.

4. Wood Products

In 1983, forest products industries employed 38,000 people in Massachusetts, representing 6% of manufacturing employment, and an annual payroll of $686 million. Paper and allied products manufacturing make up the largest segment of forest products industries in Massachusetts. Since these companies import pulp primarily from Canada and are not aligned with the forest resource base in Massachusetts, this discussion will focus on the primary and secondary sectors of the industry. The primary industry includes all parties that participating in getting trees cut and milled into rough lumber. The secondary industry is composed of those individuals who manufacture rough lumber into usable products. Total employment in both sectors is approximately 14,375 in Massachusetts.

The primary industry is composed of foresters, loggers and sawmillers. This sector of the industry is totally dependent on the public and private woodlands of Massachusetts for its resource. There are approximately 186 professional foresters, 214 timber harvesters and 101 sawmills in the Commonwealth, concentrated in the western part of the state, annually working together to produce approximately 114 million board feet of lumber, primarily from private lands. This sector is characterized by small, privately owned companies, employing three to five workers.

The secondary industry is made up of 782 companies which produce a variety of products for consumer and industrial markets, principally cabinets, custom furniture, architectural millwork, and grade lumber. This sector of the industry is concentrated in the Gardner area and northern Worcester County, where wood industry employment exceeds 20 percent.

Industry growth remains stable following a decline in the 1970s. Massachusetts is a significant regional manufacturer of wood products, with $302 million of value added manufacturing in 1982. Fifty-five percent of the value added in furniture manufacturing in New England is generated in Massachusetts – that's more than the contribution from the state of Maine!

5. Energy from Wood

The oil crisis during the 1970's generated much interest in fuelwood as a source of home heating. One million cords of wood were used in Massachusetts during the 1981-1982 season. Since 1985, fuelwood burning has decreased dramatically, but that could change with another oil shortage.

The development of smaller power production facilities which utilize renewable resources to generate electricity is specifically encouraged by both federal and state law. Utility rates in New Hampshire, Maine and Connecticut have led to the establishment or proposed establishment of a number of wood-fired power facilities in those states. There is a great abundance of wood in Massachusetts that could easily support electric power generation. For a variety of reasons, there have been no large wood-fired generating plants proposed in Massachusetts for a number of years. Again, that could change with another shortage of oil.

6. Maple Syrup

Maple syrup producers in Massachusetts produce approximately 40,000 gallons annually, with a retail value of over $1.6 million. This income is a vital source of farm income in the rural part of the Commonwealth. The maple industry also represents and important tourist attraction, which generates considerable economic spin-off benefits to rural communities.

7. Christmas Trees

There are over 400 Christmas tree growers in Massachusetts, most of whom are part-time producers. Over 50,000 Christmas trees are harvested in Massachusetts annually, with a retail value to the growers of over $1.5 million. Good markets exist for these trees in southern New England, on a retail and wholesale level. The potential exists to produce over one million trees annually in Massachusetts.

8. Enhancing Urban Areas

The trees, soil, water and wildlife in our communities make up the urban forest. City trees are intermingled with buildings, streets, sidewalks, overhead and underground utilities, parking lots, cars, parks and people. This unnatural environment makes growing conditions difficult for trees and other plants. Special care is needed to plan for and to maintain the urban forests of our towns and cities.

Twenty-two communities in Massachusetts have been commended for the high quality of management given to their urban forests and have been recognized as members of the "Tree City, USA" group, sponsored by the American Forestry Association. Proper management of street plantings provides these communities with amenities such as reduced noise pollution, cleaner air, more moderate temperatures, windbreaks, habitats for wildlife, increased property values, and a more aesthetically pleasing environment.

9. Quality of Life

Forest land provides strong economic, ecological, and aesthetic benefits for citizens of the Commonwealth. The open space provided by our forests has contributed to the economic boom Massachusetts has experienced during the 1980s. Businesses assessing relocation consider the quality of life, including scenic surroundings, open land, and clean water, to be more important than factors such as taxes and land costs. Three hundred and thirty communities in Massachusetts (out of 351) associated the "quality of life" in their communities with the presence of natural areas, panoramic vistas, rural atmosphere, traditional town centers and historic buildings. Amenities such as these are vitally linked to the forest land and urban forests of the Commonwealth.

The "tourism industry", worth an estimated $2 billion annually to Massachusetts, is largely dependent on the maintenance of the existing character of the forest. Therefore, any activity, private or public, which may profoundly impact the landscape and affects the forested ambiance, directly affects the citizens of the state as well its attractiveness for tourism. *The Massachusetts Landscape Inventory* map delineates "distinctive" and "noteworthy" landscapes (Appendix A).

The forest industry is one of the oldest in Massachusetts, beginning with the first sawmills that were present in every village. It is an agricultural industry with roots in every small town, providing local jobs and often a source of native lumber. A healthy forest industry prevents the loss of rural character and agricultural heritage and helps to preserve the local rural economy.

10. Air quality

Forest cover affects air quality in many ways. The forest filters particulates from the air, shades and cools forest interiors, through evapotranspiration, and reduces wind and consequent drying. It is also becoming widely recognized that forest may play an important part in helping to mitigate the effects of global warming.

The 1990 report of the NASF Global Warming Committee suggests that, second to reducing our worldwide consumption of fossil fuel energy, increasing the sequestration of carbon in trees and wood products is of utmost importance in helping to mitigate the buildup of atmospheric carbon and the resultant greenhouse effect. Improved forest management and wood utilization can increase the amount of carbon absorbed by forest stands, as well as effectively delaying the release of carbon dioxide through long-term storage in wood products.

11. Mineral resources

There are a variety of mineral resources in Massachusetts but relatively few are of commercial quantity or quality. Historically, many of the minerals listed below were commercially exploited, but now only sand and gravel, limestone, traprock and granite remain commercially significant. Non-metallic minerals present in Massachusetts include: alum, asbestos, barite, clay, coal, corundum and emery, cyanite, feldspar, garnet, graphite, lime, lithium compounds, mica, novaculite; precious stones of beryl, chiastolite, jasper, rhodonite, spinel and tourmaline; sand and gravel, silica; stone including granite, limestone and marble, sandstone, traprock, talc and sandstone. Metallic minerals include: copper, gold, iron, lead, manganese, molybdenum, nickel, silver, tin and zinc.

Sand and gravel are ubiquitous in Massachusetts and result from glacial deposition. Especially prevalent in major river basins, these deposits serve as groundwater aquifers. Extensive outwash plans in Plymouth County, Cape Cod, Nantucket and Martha's Vineyard are substantial areas of sand and gravel and constitute the stratum for water supply in those areas. Commercial exploitation of sand and gravel constitutes the greatest competitive use of the forest from the standpoint of mineral extraction. Limestone is confined to Berkshire County, in the western part of the state and through prevalent is mined significantly in two quarries. Thus, in terms of area, limestone mining has little effect on the forest resource, except in a localized way. Traprock is mined as well with major quarries located in the Connecticut River Valley.

III. THE FUTURE OF THE FOREST RESOURCE: CRITICAL ISSUES

A. Forest Fragmentation

The overall acreage and species composition of the Massachusetts forest are becoming far less of a concern for forest planners than the pattern of forest ownership and the impacts that this pattern will have on community land use in the future. Of he 2.9 million acres of Massachusetts forest, 84% is in the private ownership of individuals, corporations, farmers and the forest industry. The balance, or the remaining 16%, is in public control of sate, county, municipal or federal government. Despite an increase of about three percent in the amount of privately owned forest land in Massachusetts, the actual number of individual owners has increased over two-fold during the period between the Forest Service studies in 1972 and 1984. A large number of these landowners purchased land in the one to nine acre size category.

The division and sale of large forested tracts in southern New England threatens the integral value of forest ecosystems. "Parcelization" of woodland in Massachusetts is corroborated by the results of the Forest Service's landowner surveys of 1972 and 1984. In 1972, there wer 103,900 private forest owners who collectively owned 2,432,300 acres for an average of 23.4 acres per owner. Twelve years later (1984) the number of owners increased to 235,200, but the forest-base remained nearly the same (2,499,100 acres). The average woodland tract in private ownership is now 10.5 acres per owner. A 1988 newsletter of the Massachusetts Forestry Association reveals that 25% of all forested parcels between 100 and 199 acres in size that were sold between 1972 and 1984, the average size of the forest parcel is declining. In many cases, the fragmentation of forest ownership into smaller holdings precedes conversion of that forest land to non-forest uses. The speed of that conversion is also cause for alarm – between 1950 and 1970, an estimated 350,000 acres of "farm and forest" were converted to "urban development" – slightly less t han half of all estimated land consumption since colonial times. Over 112,000 acres of this open space, or just under one third of the thirty-year total, were converted during the first five years of the 1980s alone. A conservative projection shows over two million acres, or 40% of Massachusetts open space to be converted to other uses during the next 40 years with 80% of that as residential development. Since only 5.3% of that open space exists as crop or pasture land the bulk of that projected change will result in forest land conversion to non-forest uses.

These small parcels usually are uneconomical to manage and may lad to forced sales to the highest bidder, a developer or speculator with little intent to keep the property in its natural state. Though the tract may not be developed or subdivided immediately, its speculative ownership removes it from the roster of lands managed for future productivity and open space. With the shrinking acreage of contiguous ownership, management and productivity of forest lands will be increasingly difficult and less cost-effective. The future of the region's already weak forest products industry is at stake, while clean air/water, recreation, wildlife, and aesthetic values of the state's woodland are threatened.

The Commonwealth of Massachusetts provides tax incentives to forest landowners which enable landowners to keep forested parcels intact, through three "current use" state laws: the Forest Taxation and Classification Act (MGL Ch. 61), the Massachusetts Agricultural-Horticultural Law

(MGL CH.61A) and the Recreational Land Use Assessment (MGL CH. 61B). Chapters 61 and 61A allow substantial property tax deferment for woodland owners who follow and approved forest resources management plan. Through Chapter 61B also avails forest landowners tax relief, no management plan is required.

According to the 1990 Statistical Report, prepared by the Bureau of Forest Development, Department of Environmental Management, the number of plans and acreage under chapters 61 and 61A continues to increase. Collectively, these two programs in clued over 270,000 acres.

B. Availability of Timber to the Wood Products Industry

Increasing fragmentation of the resource base, combined with a shorter tenure of ownership of forest land, have had a great impact on the timber industry in the Commonwealth. Loggers and sawmillers face difficulties in obtaining timber from smaller parcels of land with an increasing number of landowners. Escalating operating costs, including expensive machinery, fuel and labor expenses, as well as a shrinking labor pool, have accompanied a rise in what the harvester must pay to buy standing timber.

Many landowners are not aware of the value of the timber on their woodlands and those that are may be reluctant to harvest timber. These perceptions may be changing. A survey conducted by the Forest Service, *The Forest Landowners of Southern New England* (Draft) in 1989 reveals some interesting patterns of timberland ownership attitudes in Massachusetts. The survey indicated that those inclined to harvest in the near or indefinite future outnumbered those opposed to harvesting by 2 to 1. Furthermore, those who would harvest sometime in the future owned almost four time sthe amount of acreage as those who would never harvest.

The primary reason for owning land is as "part of residence", reflecting the small acreage development in recent years. "Other" reasons include recreational use, timber investment, and part of an estate. This "other" group includes only 6% of owners, but retains 25% of the acreage.

The largest percentage of owners own their land for aesthetic enjoyment and are reluctant to conduct a timber harvest if the scenery would be ruined. The wood industry must do a better job of assuring landowners that a timber harvest can be completed without extensive damage to the remaining trees and can actually enhance the aesthetics of the woodlot by providing better access roads and more scenic vistas.

C. Impacts on Wildlife

Although stable population of much of our wildlife, including wild turkey, black bear and white-tailed deer have been reestablished, many species still need our protection. A number of programs have been established to do this in the Commonwealth. Since 1983, Massachusetts residents have made contributions from income tax refunds to the Nongame Wildlife Fund. This money is used to preserve and manage non-game wildlife.

The Massachusetts Natural Heritage Program was initiated to inventory all threatened and endangered species in Massachusetts, identifying site locations, populations, and status of each listed

species. The inventory provides a central place for planners, developers, and conservationists to find geographical information on the Commonwealth's rare species and natural communities for use in environmental impact assessment, natural resource development, natural area protection and research.

The variety, frequency, distribution and health of Massachusetts' wildlife depends directly on the size, species and distribution of forest trees, but also contiguity and connectivity are important ecosystem requirements. Wildlife biologists are questioning the utility of setting aside relatively small, unconnected preserves to protect wildlife, such as state parks and forests. They are advocating a system of linkages or "corridors" between these preserves so they may continue as biologically diverse ecological systems in an increasingly fragmented and urbanized land base. Protecting existing riverside corridors, an infrastructure upon which wildlife is vitally dependent, is a beginning. The Massachusetts Riverways Project was initiated to achieve that goal.

D. Sustainable Forestry

Sustainable forestry focuses on the retention, conservation and health of forest land in the face of increasing development so that our forests continue to provide the multiple benefits that citizens of the Commonwealth expect. This includes maintaining a viable forest products industry, sufficient economic incentive for landowners to retain and manage forest land, and attention to the protection and management of Massachusetts wildlife. It also involves education of the 235,000 landowners who control the fate of our forests.

Cooperation between the diverse groups who use the forest resource is vitally important to the goal of sustainable forestry. These groups include the forest industry, passive recreation users, wildlife managers and observers, watershed managers, foresters, forest landowners, hunters, anglers, local land trusts and any other group who has an interest in maintaining a viable, healthy and productive forest for all users. The Department of Environmental Management was successful in bringing these groups together to develop the Massachusetts Forest Resources Plan. Published in 1985, the Plan identifies the challenges and opportunities for Massachusetts forests and makes extensive recommendations towards resolution of some of the problems addressed in this booklet. These groups continue to work together to address the numerous recommendations in the Plan.

Forest landowners need improved techniques for realizing timer, wildlife and recreational benefits from the same piece of forest land. Charging hunting and recreation fees to users is an option that is popular elsewhere in the eastern United States. Favorable tax programs for landowners who practice wildlife management is another option. A reassessment of current forest land tax laws would be useful in addressing the problem of under-enrollment.

Few landowners will practice forestry if it is not economical. At present, there are few favorable markets for lower quality wood and this acts as a disincentive to forest management. A recent government study identified products from low quality wood in Massachusetts that have a high potential for success in local, regional and national markets. Not it is up to either the private sector or a combination of the private/public sector to respond.

E. Conserving the Land Base

The problems caused by fragmentation of forest land must be addressed. Most forest landowners in Massachusetts retain ownership of their property for less than ten years and the goals of each successive landowner often differ. In monetary terms, the development potential of forest land in Massachusetts almost always exceeds is value for forestry uses. These factors make preservation of our forest land a difficult task. An important part of the solution are two tools currently being used in the Commonwealth: conservation restrictions and the Chapter 61 programs, the "current use" property tax law.

Land Conservation Trusts (LCTs) are non-profit entities than can acquire property through a conservation restriction or easement, purchase, or donation o n the part of a local landowner. In some cases, LCTs have assembled development packages for properties which include a lease to the original landowner for farming or timber production and a limited cluster development on a corner of the farm acreage so that the landowner can realize some income from the property. They also purchase lands on occasions when rare or unique features are at stake and the possibility of a gift of the land or an easement does not exist. Many will hold land for purchase by a governmental entity. As of 1991, over 31,000 acres have been protected with conservation restrictions (Table 1).

Generally, LCTs have as on of their ultimate stewardship goals the use and management of land for the public benefits to be derived from open space and natural area protection. The kinds of features of interest to LCTs include, but are not limited to, areas which contain unique wildlife, high quality wildlife habitat, rare plants or unusual plant communities, interesting or unusual geologic or archaeological features or particularly large open space areas unbroken by development. Size of the areas for consideration is usually less important than quality and defensibility against disturbance.

Woodland owners enrolled in Chapter 61 series of programs have made a long-term commitment to managing their forest resources. All parcels that fall within lands classified under this legislation may be initially identified as potential "willing sellers". Too, the management plans associated with those parcels are easily amended to include Stewardship goals as the Chapter 61 format was retained as the basis for the Stewardship Plans. Figure 4 depicts Chapter 61 enrollees and acreage by County in Massachusetts.

MASS. CONSERVATION RESTRICTIONS -- 1991 Table 1

County	CR Number	CR Acreage
Barnstable	199	3,137
Berkshire	42	4,099
Bristol	62	2,171
Dukes	75	6,088
Essex	18	3,237
Franklin	10	762
Hampden	5	80
Hampshire	26	727
Middlesex	351	4,939
Nantucket	35	908
Norfolk	79	2,652
Plymouth	55	657
Suffolk	5	22
Worcester	59	2,079
Totals	1,021	31,558

New and innovative approaches to keeping forest land in an undeveloped and productive state are gaining popularity in the Commonwealth. A healthy forest industry with profitable markets is a vital part of this picture.

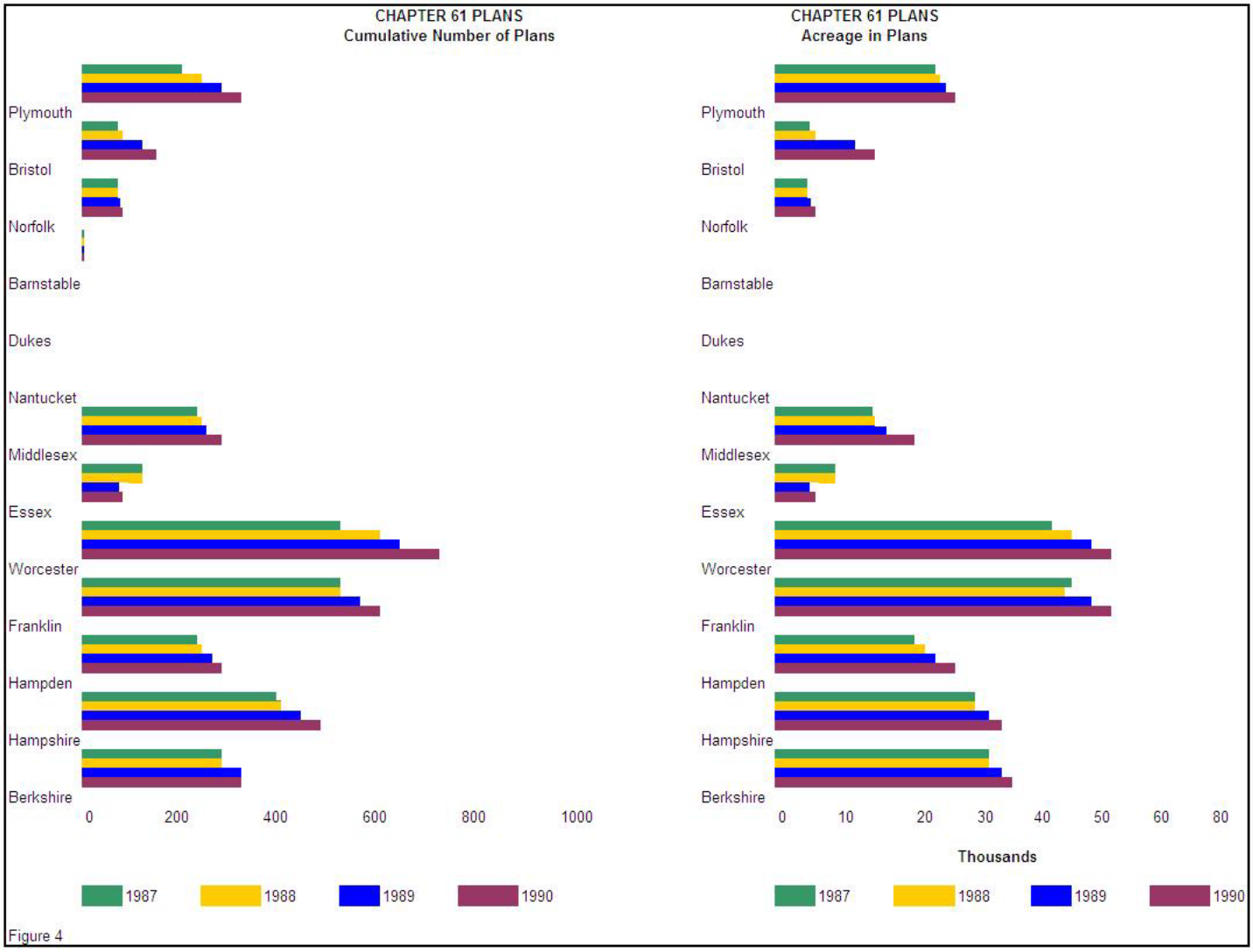

CHAPTER 61 PLANS
Cumulative Number of Plans
Plymouth
Bristol
Norfolk
Barnstable
Dukes
Nantucket
Middlesex
Essex
Worcester
Franklin
Hampden
Hampshire
Berkshire
0
200
400
600
800
1000
1987
1988
1989
1990
CHAPTER 61 PLANS
Acreage in Plans
Plymouth
Bristol
Norfolk
Barnstable
Dukes
Nantucket
Middlesex
Essex
Worcester
Franklin
Hampden
Hampshire
Berkshire
0
10
20
30
40
50
60
80
Thousands
1987
1988
1989
1990

Figure 4

IV. THE FOREST LEGACY PROGRAM: ADDRESSING THE PROBLEM

The forests of Massachusetts contribute greatly to our economy and provide the ecological systems and visual landscapes essential to our quality of life. Historically, demands for raw materials (wood, land for development) have competed with the need to protect and conserve natural resources (water supply, recreation areas, wildlife). Meeting these diverse needs on a sustained basis without sacrificing the integrity and the productive capacity of the resource base is the challenge that we face in the Commonwealth.

In recent years, several social and economic trends have significantly affected the balance of natural resource utilization and protection in the Commonwealth. Increasing residential and commercial pressures have caused the development of substantial areas of previously open or forested land, raising questions of water supply protection and altering the visual landscape to which communities are accustomed. Development pressures are compounded by faltering agricultural and wood products industries which cannot provide competing economic incentives for land ownership.

Also documented above is the presence of a strong network of local LCTs which, over the last two decades especially, have demonstrated a sound record of land conservation. Through their collective efforts, these organizations have cultivated a landowner public that is knowledgeable of, and receptive to, the concept of conservation easements.

It followed then, that LCTs could play a key role in the Massachusetts Forest Legacy Program. In the fall of 1991, a committee was convened to implement the Forest Legacy Program in Massachusetts composed of state resource management professional and private sector representative os LCTs and watershed associations – those organizations that already have a constituency and could be counted on to develop public support and program accountability.

Purchase of conservation easements under the Forest Legacy Program from willing owners of adjacent parcels would protect in perpetuity valuable woodland from conversion to non-forest uses. Moreover, since easement requires a "Forest Stewardship Plan" that addresses traditional forest uses and public values, privately-owned working forests would be insured, as well as protection of environmental values and contributions toward rural economies.

A. Eligibility for Forest Legacy Areas

Eligible areas are catalogued in Appendix C and represent a rich and varied assortment of forest lands. Many forest lands across Massachusetts will meet the Forest Service eligibility criteria for the Forest Legacy Program. To determine the outstanding ones, each area, in addition to documentation of important values within its boundaries, will be evaluated within its regional context. Floodplains, extensive wetlands, high elevation forests with characteristic vegetation, threatened and endangered species habitats, coastal plain aquifers, riverine and coastal shorelines all constitute distinctive regionally occurring natural resources in Massachusetts. *An Alas of Massachusetts River Systems: Environmental Designs for the Future* makes the case for the regional context utilizing river basins as a physiographic means of delineating natural systems. Those values may be expressed in terms of regionally distinctive geologic or ecologic occurrence (for example, habitat corridors or

riparian linkages especially suited to endangered/threatened species protection). Ideally, nominated Forest Legacy Areas would embody multiple and regional public values, be acquirable and enjoy public support for that purpose, be threatened with conversion in the short-term, abut existing public open space blocks and corridors, and be delineated by natural boundaries (physiographic, geologic, hydrologic/riparian) and contribute to bio-diversity. Too, the regional values may be expressed as societal benefits.

In early 1992, LCTs and other conservation organizations across the state were invited to submit potential Forest Legacy Areas that would meet Forest Service eligibility criteria listed below:

1. Legacy area criteria

For inclusion in the Forest Legacy Program lands must:

a. Be threatened by present or future conversion to non-forest uses

b. Contain one or more of the following important public values:

(1). Scenic Resources

(2). Public recreation opportunities

(3). Riparian/hydrologic areas

(4). Fish and wildlife habitat

(5). Known threatened and endangered species

(6). Known cultural/historic areas, and/or

(7). Other ecological values

c. Provide opportunities for continuation of traditional forest uses

d. Reflect important regional values

2. Evaluation factors

The nominator of a proposed Forest Legacy Area may quantify and qualify the information which utilizing these evaluation factors, and provide a persuasive argument for the nominated area. This list is provided as a guideline for nominations and the essential items are repeated in checklist form in Appendix B.

a. Threat by conversion to non-forest uses:

(1). Type and level of threat

There are various kinds and degrees of threat to valuable forested areas, such as encroaching housing development, improved town roads, sewer line and power line extensions into undeveloped areas, fragmentation of land ownership in smaller, less manageable parcels. In determining the threat to an area, factors to consider include the following:

- Area is in danger of conversion to non-forest use within 5 years.
- Area may remain wooded, but will become further fragmented.
- Area is currently on the open market/listed by realtors.
- Loss of one tract would open the area to further development.
- Area is remote, but vulnerable; percable, frontage on town road.
- Area is not under Ch. 61 or other forest management program.
- Area may remain wooded, but is in danger of being over-harvested.

(2). Factors affecting acquirability

Even if a forested area is threatened with conversion to non-forest use, protecting it under the Forest Legacy program can only be accomplished if certain conditions exist w hich favor implementation. In determining the prospects for a successful effort under the Forest Legacy Program, factors to consider include the following.

- Area is owned by willing seller(s).
- Owner understands conservation restriction/easement concept.
- A 25% cost share match is available (town, state or land trust).
- Area may be available at below fair market value (bargain).

b. Contain one or more important values:

(1). Scenic resources

The scenic aspects of a natural resource area may often by subjective, but there are several means of measuring the special qualities that make a given area stand out. The criteria set out in DEM's Scenic Landscape Inventory and the Mass. Scenic Roads Acts provide a means of citing scenic qualities. In identifying scenic amenities of a Forest Legacy area, these factors must be considered.

- Area is listed in the DEM's 1985 Mass. Landscape Inventory as "Distincitive" or "Noteworthy"."
- Area includes locally important panoramic views and/or exceptional short views.
- Area is situated along a designated scenic road.

(3). Riparian Areas

In an urbanizing state such as Massachusetts, one of the most important forest "products" may be water. Proper management of forest lands through institution of a Forest Legacy Area can

increase the quality and quantity of water for the residents of the Commonwealth. Factors to be included in determining the value of riparian areas:

- Area is situated on major river or stream recognized by Mass. DEM Scenic Rivers Inventories or Mass. DFWELE Adopt-a-Stream programs.
- Area has extensive (over 300') river or wetland shoreline.
- Area includes floodplain and natural valley storage components (Use USGS Atlas; FEMA flood hazard maps)
- Area contains a minimum 80' strip of native trees and shrubs as a natural buffer and sediment filter, per USFS guidelines outlined in *Riparian Forest Buffers.*
- Area contributes to public or private drinking water supply (DEP Zone 2).
- Area contains important wetlands; especially isolated wetlands and/or vernal pool.s

(4). Fish and wildlife habitat

Preventing the fragmentation of forest tracts into smaller units is crucial to maintaining viable populations of particular wildlife species. Factors to be considered:

- Area contains outstanding habitat, as evaluated per Mass. DPW guidelines, and other ecologically recognized criteria for one or more species that include:

    - Forest interior nesting birds
    - Significant populations of resident species
    - Neo-tropical migrant species
    - Areas for resting and feeding of migratory species
    - Forest inhabiting mammals, reptiles, amphibians and invertebrates.

. - Area exhibits connective habitats, corridors, habitat linkages and areas that reduce biological isolation.

- Known threatened and endangered species.

As urbanized and fragmentation of forest lands continues, the need to give special attention to threatened species of fish, wildlife and plants increases. Areas nominated for the Forest Legacy Program should be inventoried for such natural habitats that may contain imperiled species, considering the following factors:

- Area contains plant or animal species on Mass. State list as Endangered, Threatened or of Special Concern (consult Mass. Natural Heritage Program at Mass. Division of Fisheries and Wildlife).

(5). Known cultural resources

Material evidence of the earlier human occupation in Mass. Comprises a unique and irreplaceable resource, as do historic feature sand vernacular landscapes. Factors to consider:

- Area contains recorded archeological site; e.g. burial, midden, fire pit, or artifacts of Contact, Woodland or Archaic periods.
- Area includes historic features; e.g. charcoal kilns, church or village sites, battle sites, historic roads, paths or lookouts.

(6). Productive soils

Of the 3.2 million acres of forests in Mass., nearly 67% are classified as "prime," based on the productive soils upon which they grow. This classification system is useful in determining the importance of individual tracts within a Forest Legacy Area:

- Area contains soils of Prime, or State or Local significance for agriculture.
- Area contains soils of Prime, or State or Local significance for forestry.

(7). Other ecological values

In addition to the characteristics already outlined, an area may exhibit additional or exceptional conditions that are important and add to the quality of the nominated Forest Legacy Area, such as:

- Area provides a mix of ecological communities (bio-diversity).
- Area includes ecological communities which are dwindling in Mass., such as vernal pools, mature riparian floodplain forest, pine barrens.
- Area contains old growth of forest (natural area).
- Area provides immediate watershed/water supply protection.

c. Provide opportunities for continuation of traditional forest uses.

Maintaining traditional forest uses is important in a Forest Legacy Area in that it permits owners to remain on the land without requiring high-cost services (schools, street clearing and repair) by the town. Positive factors which reinforce this include:

- Area will remain available for sugar bush operation, cord wood or timber management under a Stewardship Plan.
- Area will continue to serve watershed and water filtration role.
- Area will continue to provide outdoor recreation opportunities.

d. Regional values

Through careful selection, Forest Legacy Areas should provide units that have regional, not just local significance. The feature sand functions of these units should include:

- Linkages for recreational values, such as trails, especially along river greenbelts, mountain ridges and parcels which connect existing publicly-owned lands.

- Public access to boating and swimming relative to the needs of local population centers and the effects of projected land use change.
- Public or private drinking water supply protection (ground or surface water).
- Scenic qualities having their basis in the traditional New England natural and cultural landscape.

It should be noted that a Forest Legacy Area nomination is a brief written narrative utilizing elements in "Basic Criteria" as listed below and as in the executive summary format contained in Appendix C. Other pertinent items may be included, but the points listed under Basic Criteria (below) must be included.

3. Designation Requirements for Forest Legacy Areas

(a). Basic Criteria

For an area to be designated a Forest Legacy Area the following are required:

- Designation of each geographic area on a topographic map.
- Description of each important forest area.
- Summary of the important environmental values and how they will be protected and conserved in each Forest Legacy Area.
- List of public values that will be derived from establishing each Forest Legacy Area.
- Identification of the governmental entity or entities that may be assigned management responsibilities for the lands enrolled in the program.
- Documentation of the analysis and the public involvement process.

(b). Memoranda of Understanding

After Forest Service and Secretary of Agriculture review and approval, two kinds of memoranda of understanding will be required for designation of Forest Legacy Areas. The first is a memorandum between the Massachusetts Division of Forests and Parks, Department of Environmental Management (DFP) and the Forest Service, developed upon establishment of the Massachusetts Forest Legacy Program, for the purpose of specifying roles and responsibilities for implementing the program. The second type of memorandum is tract-specific, between DFP, Forest Service and participating entities, negotiated whenever interests in lands within a Forest Legacy Area are required, for the purpose of identifying roles and responsibilities for management and monitoring, and cost-share matches.

(1). The umbrella memorandum of understanding

The umbrella memorandum will address the following items:

* Costs and funding

  * Identify direct and indirect costs expected to be incurred in establishing the Forest Legacy Program, and acquiring and administering interests in lands During the first five years of the program. Revise or renew these cost estimates as appropriate.

* Identify and propose sources of cost-share matches.

* Planning

    * Estimate the amount of work needed to complete the Assessment of Need and Identification of Forest Legacy Areas.

    * Define a process for revising landowner Stewardship Management Plans.

    * Identify how specific tract-by-track acquisition needs and priorities will be established.

    * Identify how broad baseline data needs will be accomplished.

* Acquisition

    * Identify who is responsible for title work, appraisals, surveys, and similar Pre-acquisition work.

    * Define a process for determining the value of donated interests in lands.

    * Identify the circumstances requiring the assembly of baseline data and the format for such data.

* Management

    * Define responsibilities for management for interests in land acquired or dedicated to the program.

    * Identify possible activities needed to enhance, restore or maintain resources to meet the intent of the program and general responsibilities in carrying out such activities.

* Administration

    * Estimate the staff work to implement the program.

    * Define responsibilities for processing applications to the Forest Legacy Program

    * Establish procedure for monitoring the terms of easements and identify who will be responsible.

    * Identify responsibilities for periodic reports summarizing the achievement of Forest Legacy goals in Massachusetts.

* Determine the frequency of periodic program statements by DFP, for the Forest Service providing specific detailed information about work to be performed.

(2). The tract-specific memoranda of understanding

Tract-specific memoranda of understanding between DFP, the Forest Service and participating entities, negotiated whenever interests in lands within a Forest Legacy Area are acquired, for the purpose of identifying roles and responsibilities for management and monitoring, and cost-share matches.

The above list should also be used in developing tract-specific memoranda, although many of the planning and administrative items will not apply. While the umbrella memorandum will identify general responsibilities and provide estimates of the costs and work to be performed, the tract-specific memorandum will document the cost-share match, monitoring the interests in lands. In addition to the Forest Service and DFP other participating entities, such as land trusts or citizen groups, may be parties to the tract-specific memoranda.

B. Phase I Designation of Forest Legacy Areas

The Massachusetts Forest Legacy Committee solicited statewide nominations of potential Forest Legacy Areas from regional land conservation trusts. The responses are contained in Appendix C and are in the order listed below. The following constitute those initial eligible nominations by sponsor and Forest Legacy Area name and keyed to the map (Appendix D) by number:

* Belchertown Conservation Commission
    1. Jabish Brook Watershed

* Berkshire County Land Trust
    2. Stockbridge Yokun Ridge Reserve

* Concord Land Conservation Trust
    3. Estabrook Woods

* Essex County Greenbelt Association
    4. Cape Ann Forest Legacy Area

* Hilltown Land Trust
    5. Kinne Brook Valley

* Massachusetts Department of Environmental Management
    6. Connecticut Valley Forest Legacy Area (Holyoke Range sub-unit)
    7. East Branch, Westfield River

* Mount Grace Land Conservation Trust
    8. North Quabbin Corridor

* Nashua River Watershed Association
    9. Nashua River Greenway

* New England Forestry Foundation
    10. Charles River Area

* Pioneer Valley Planning Commission
    11. Westfield River

* Sheffield Land Trust
    12. Mount Race/Jug End

* Sudbury Valley Trustees
    13. Cedar Swamp

* The Compact of Cape Cod Conservation Trusts
    14. Punkhorn Parklands
    15. Lookout Ridge
    16. Pine Barrens and Quashnet River Woodlands

Additionally, the committee selected five of the nominations for recommendation to the Forest Service and the Secretary of the U.S. Department of Agriculture for Phase I. Characteristically, the nominations represented great variety and were well documented, well distributed across the state, from ridge tops to river valleys to the coastal plain; possessed a high degree of threat to conversion; were submitted by organizations which had a demonstrated track record, and could move quickly to the acquisition stage; and especially important, had substantial local support. Those recommendations are designated on the map (Appendix D) by number and include:

- Stockbridge Yokun Ridge Reserve (#2)
- Estabrook Woods (#3)
- Connecticut Valley Forest Legacy Area (#6)
- North Quabbin Corridor (#8)
- Nashua River Greenway (#9)

Those recommendations include 12,823 acres to be purchased and will be part of five Forest Legacy Areas totaling approximately 37,000 acres. The committee believes it is realistic to complete these in three years at a total cost of $12.7 million with $5 million requested in the first year.

Additionally, the committee was asked to select from the above list of five, a Legacy Area which could move quickly on a parcel or parcels if limited funding became available. The Stockbridge Yokun Ridge Reserve was chosen (#2 on Appendix D) because a willing seller was available, the Berkshire County Land Trust (the sponsor) could move quickly and the Legacy Area was one which clearly embodied the intent of the Forest Legacy Program. If problems with landowner negotiations

should occur with the Yokun Ridge parcel, the Forest Legacy subcommittee selected the Western Connecticut Valley Water Supply Unit as the next priority.

C. Public involvement plan

The responsibility for Forest Legacy implementation is through the Forest Legacy Subcommittee as authorized by the Forest Stewardship Committee. The subcommittee was designed to provide open space acquisition expertise and was appointed by the Chief Forester, Bureau of Forest Development, Division of Forests and Parks, Massachusetts Department of Environmental Management. Those committees, broadly representing the many facets of the Massachusetts forestry community, constituted the initial phase of public participation.

As previously discussed, the task of the Subcommittee was to develop the assessment which would make the case for the Forest Legacy Program in Massachusetts, representing its various constituencies. Further, the Subcommittee took nominations for Forest Legacy Areas and chose those areas to be eligible for initial funding. Public notification of the process is the responsibility of the Subcommittee and its tasks are to:

- Develop with the Forest Service a paid legal notice to local and statewide newspapers including: executive summary, news releases, Forest Service brochure on the Forest Legacy Program.
- Notify units of local government and landowners of Forest Legacy Program where Forest Legacy Areas are proposed through news releases.
- Notification of congressional delegation requesting support.
- Preparation of a news release when program is approved.
- On-going public involvement by Forest Legacy Area sponsor.
- Review, comment and approval by Stewardship Committee which includes 28 members diversely representing the forestry community.
- Notification of regional land trusts community land trusts, watershed associations, and units of state and local government soliciting Forest Legacy Area nominations.
- Upon approval of the assessment each Forest Legacy Area sponsor will organize an informational meeting to discuss specific acquisition strategies of proposed Forest Legacy Areas.
- Production of a video tape explaining the Forest Legacy Program in cooperation with Connecticut and Rhode Island.

News releases and coverage of local meetings held by land trusts have not generated comments specific to the notion of the Forest Legacy Program as a method of land acquisition. The lack of comment may have its basis in the fact that the public land acquisition in Massachusetts has a long history of public support which precedes the Forest Legacy Program. Too, the preferred method of protection, conservation restrictions, are familiar instruments in that undertaking.

Public notification and participation items specific to Forest Legacy Area nominations are contained in the executive summaries (Appendix C). Additionally, all documents submitted to the Forest Legacy Subcommittee supporting Forest Legacy Area nominations, are public records and available through the Massachusetts Stewardship Committee.

V. SUMMARY

Massachusetts has a long and consistent record of supporting open space conservation and protection of traditional forest-based activities. The Forest Service's Forest Legacy Program will provide another important tool to be used in conjunction with existing state and private programs in order to preserve critically threatened scenic landscapes, working forests, and outdoor recreation opportunities.

The state of Massachusetts is unparalleled in its efforts to protect open space. Capital budgets passed by the Massachusetts legislature in 1983 and 1987 have provided over $750 million for open space acquisition. Even in these difficult economic times, Governor Weld has strongly supported open space programs by authorizing $20 million for land acquisition in FY '92. Secretary of Environmental Affairs, Susan Tierney, has made the protection of forest resources one of her top priorities for land protection.

The citizens of Massachusetts have echoed this concern for protecting forest resources. The 1988-1993 Statewide Comprehensive Outdoor Recreation Plan (SCORP) details conservation goals and actions to be taken by state, municipal and private organizations. The SCORP was developed with extensive public participation involving hundreds of citizens and interest groups. The SCORP singled out conservation of forest resources as on of the high priority goals for cooperative public and private efforts. The SCORP also calls for action to protect wildlife habitat, to enhance trail-based recreation, and to protect water resources. The Forest Legacy Program could provide much needed financial support for each of these priorities.

The Forest Legacy Program's goals and techniques are particularly well suited for Massachusetts. As the landscape becomes increasingly fragmented by residential development, the focus of conservation efforts is on preserving the last large tracts of land providing multiple public benefits; recreation, wildlife habitat, protection of water resources, and which support traditional economic activities of forestry and farming. State and private land protection programs are already actively working to protect these critical areas. With development pressure comes high land prices, and both state and private organizations have found the purchase of development rights to be an efficient and cost-effective tool. The Department of Food and Agriculture's Agricultural Preservation Restriction Program ahs preserved 28,500 acres on 295 farms since 1980, by acquiring the development rights to these farms. Similarly, municipalities and private conservation organizations have purchased development rights using a recorded Conservation Restriction thereby protecting over 31,500 acres in 1,021 tracts since 1970.

The Forest Legacy Program will significantly enhance an existing network of governmental and private organizations working together, employing sophisticated techniques, to protect the most special and most threatened resources in Massachusetts. Perhaps no other state iss o well poised to make effective use of the Forest Legacy Program.

The Massachusetts Forest Legacy Committee believes this document clearly shows the vital need for the Forest Legacy Program in the Commonwealth and substantiates the ability and readiness of that committee to effectively deliver a successful program in a timely manner.

Authorization for conducting the Forest Legacy Program in Massachusetts was effected by Governor William F. Weld in a letter dated October 3, 1991 and is contained in Appendix E. Additionally, the Stewardship Committee minutes of August 27, 1991, authorizing the establishment of a Forest Legacy Program Subcommittee, are in Appendix E.

VI. REFERENCES

Bacher, D. 1991. *National Directory of Conservation Land Trusts.* Land Trust Alliance, Washington, DC.

Bickford, W.E. and U.J. Dymon. 1990. *An Atlas of Massachusetts River Systems – Environmental Designs for the Future.* University of Massachusetts Press, Amherst.

Birch, T.W. 1989. *The Forest Landowners of Southern New England* (Draft). U.S.D.A. Forest Service. Northeastern Forest Experiment Station, Rador, PA.

Bond, R.S. 1989. *Forest Landowners of Massachusetts in 1984* in Massachusetts Forestry Association LETTER, Petersham. Vol. 19, No. 3.

Crosby, I.B. 1932. Report on the Mineral Resources of Massachusetts – A Survey of the Literature. Massachusetts Industrial and Development Commission, Boston.

DeGraff, R.M. and D.D. Rudis. Revised 1987. *New England Wildlife: Habitat, Natural History and Distribution.* Northeastern Forest Experiment Station, U.S.D.A. Forest Service, Broomall, PA. General Technical Report NE-108.

Dickson, D.R. and C.L. McAfee. 1988. *Forest Statistics for Massachusetts – 1972 and 1985.* Northeastern Forest Experiment Station, U.S.D.A. Forest Service, Broomall, PA Resource Bulletin NE-106.

Dupree, T.A. 1991. *Rhode Island Stewardship Directory.* Division of Forest Environment, North Scituate, RI.

Greenbaum, D.S. and A. O'Donnell. 1987. *Losing Ground: The Case for Land Conservation in Massachusetts.* Massachusetts Audubon Society, Lincoln.

MacConnell, W.P. et al. 1985. *Prime Forest Land Classification for Forest Productivity in Massachusetts.* Massachusetts Agricultural Experiment Station, University of Massachusetts, Amherst. Res. Bul. No. 705.

MacConnell, W.P. et al. 1985. *Forest Producivity Mapping of Massachusetts..* Massachusetts Agricultural Experiment Station, University of Massachusetts, Amherst. Res. Bul. No. 735.

Massachusetts Executive Office of Communities and Development and Pioneer Valley Planning Commission. 1988. *The Growth Management Workbook.* Boston.

Michaels, P.J. 1989. *The Greenhouse Effect: Chicken Little and Our Response to Global Warming.* Journal of Forestry, Vol. 87, No. 7.

More, M.E. 1985. *Massachusetts Forest Resources – A Working Guide to Action.* Division of Forests and Parks, Massachusetts Department of Environmental Management, Boston.

National Association of State Foresters. 1990. *Global Warming and Forestry in the United States*. Washington, DC.

Natural Heritage and Endangered Species Program. 1991. *Atlas of Estimated Habitats of State-Listed Rare Wetlands Wildlife.* Massachusetts Division of Fisheries and Wildlife. Boston.

Office of Planning. 1981. *The Massachusetts Landscape Inventory.* Massachusetts Department of Environmental Management. Boston.

Persen, C.M. 1989. *Forest Resources of Massachusetts*. Massachusetts Cooperative Extension, University of Massachusetts, Amherst.

Sedjo, R.J. 1989. *Forests to Offset the Greenhouse Effect*. Journal of Forestry, Vol. 87, No. 7.

Smith, k.J. et al. 1988. *For Our Common Good – Open Space and Outdoor Recreation in Massachusetts.* Massachusetts Department of Environmental Management, Boston. Volumes One and Two.

Soper, J.W. 1992. Final GEIR – Forestland Management. Division of Forests and Parks, Department of Environmental Management, Boston.

U.S.D.A. Forest Service. 1992. *Forest Legacy Program Final Guidelines*. Washington, DC.

U.S.D.A. Forest Service. 1991. *New York – New Jersey Highlands Regional Study-Draft Report*. Northeastern Area, State and Private Forestry, Radnor, PA.

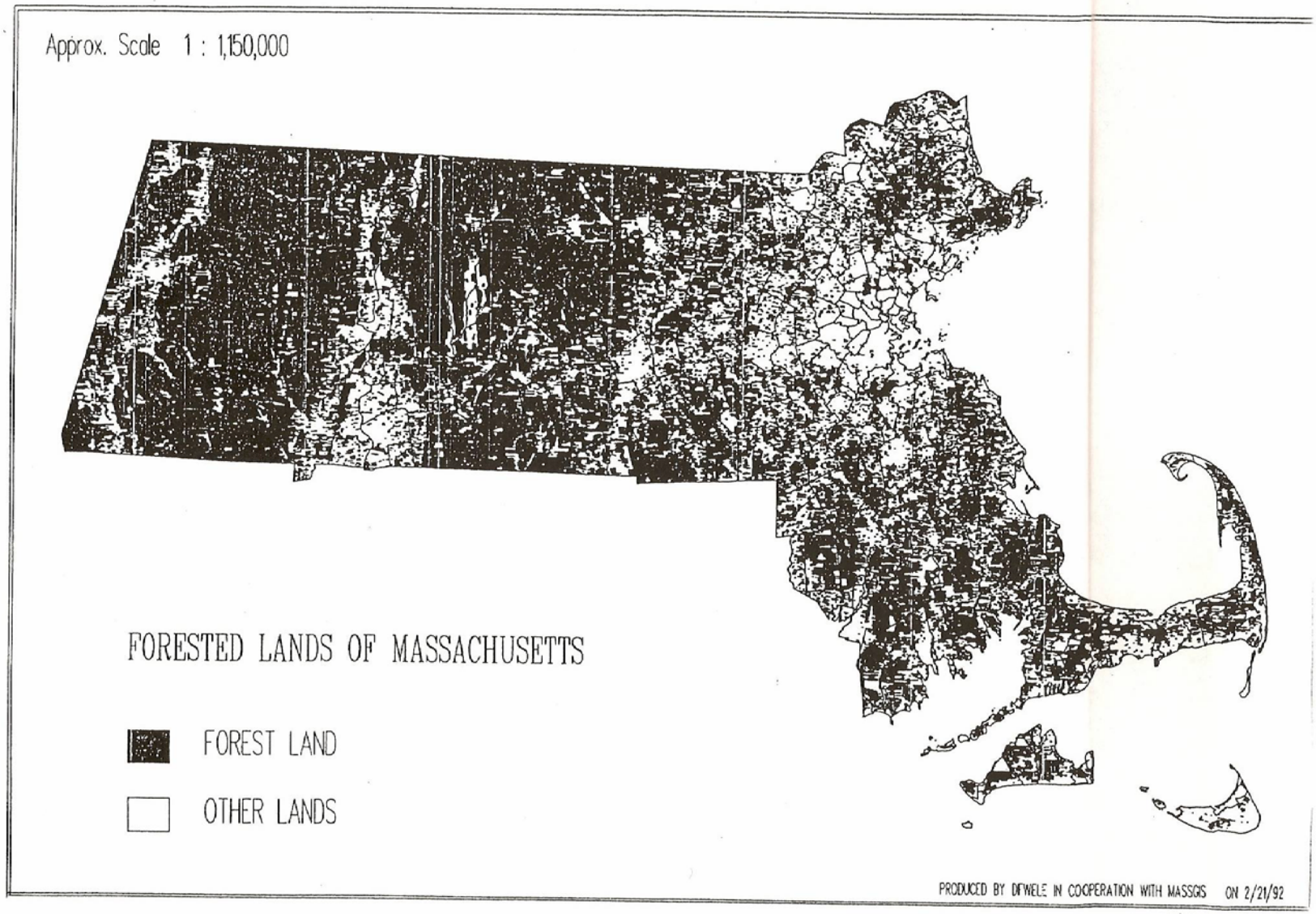
Welsch, D.J. 1991. *Riparian Forest Buffers: Function and Design for Protection and Enhancement of Water Resources.* Northeastern Area State and Private Forestry, U.S.D.A. Forest Service, Radnor, PA. Bul. No. NA-PR-07-91.

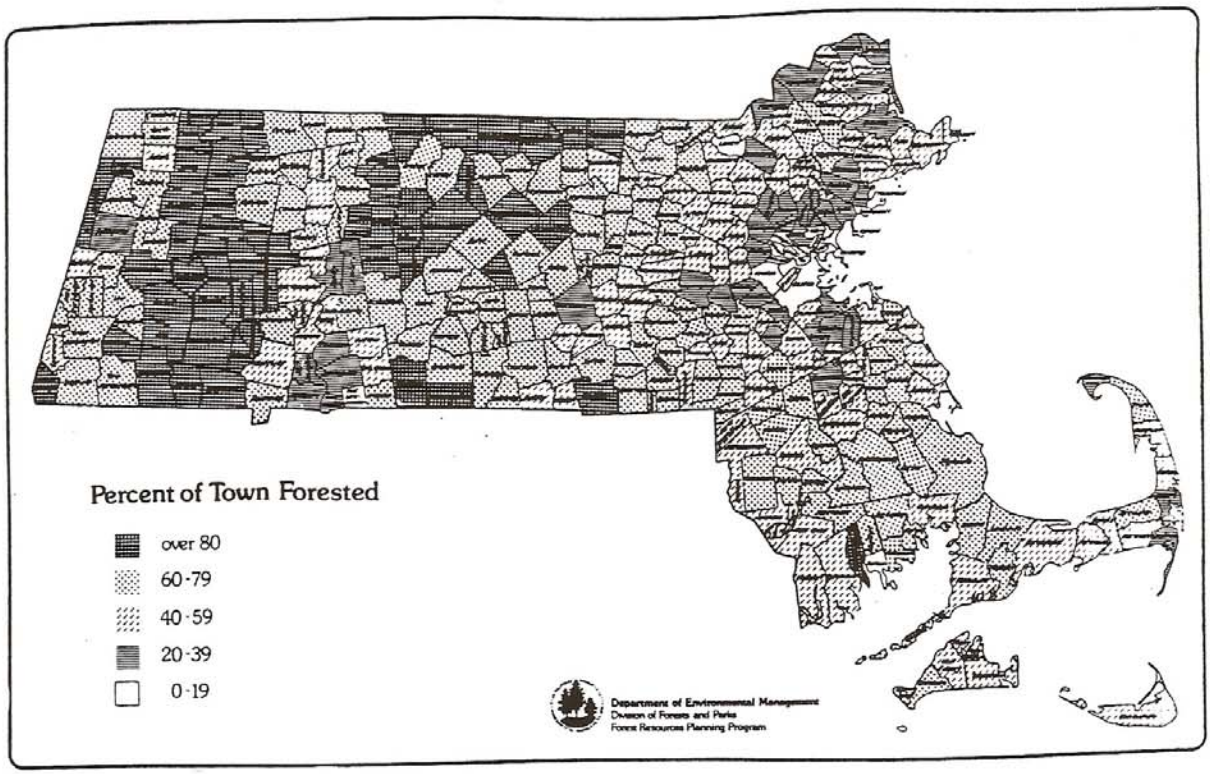
Westover, P. and D. Litterer. 1989. *Conservation Areas of Massachusetts.* Massachusetts Society of Municipal Conservation Professionals.

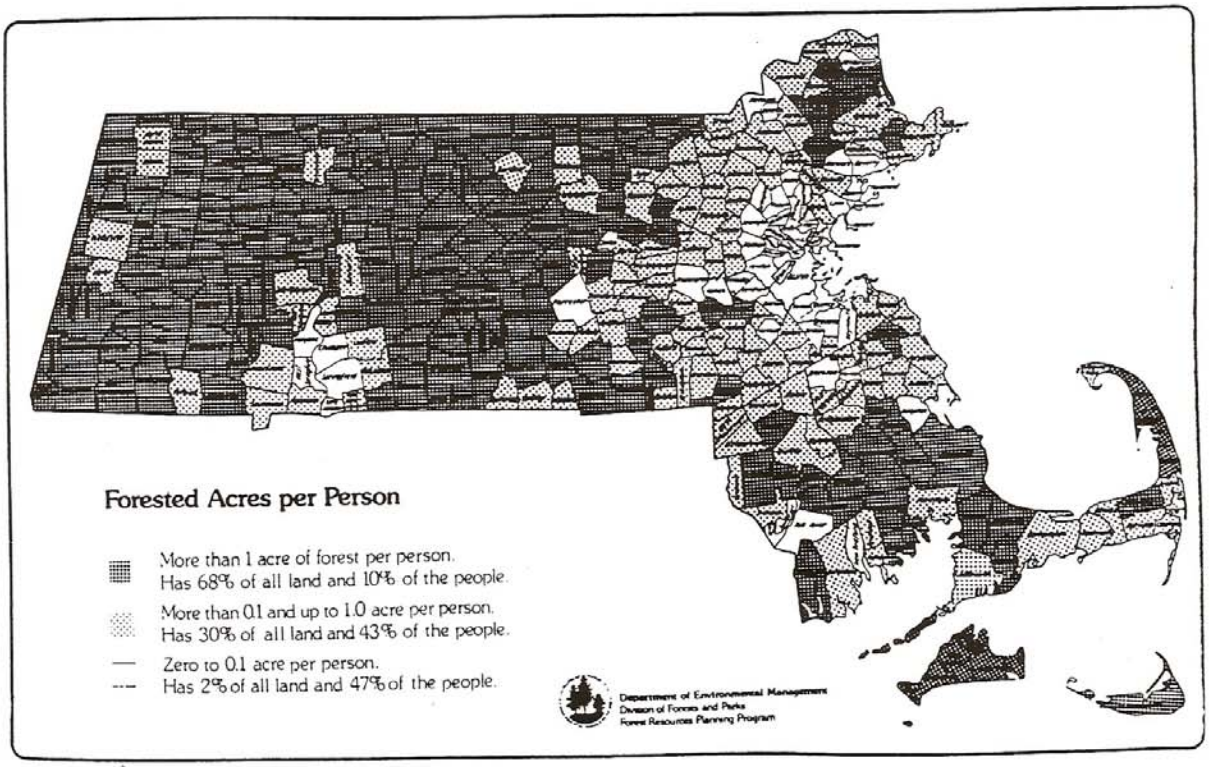
VII. APPENDIX

Appendix A

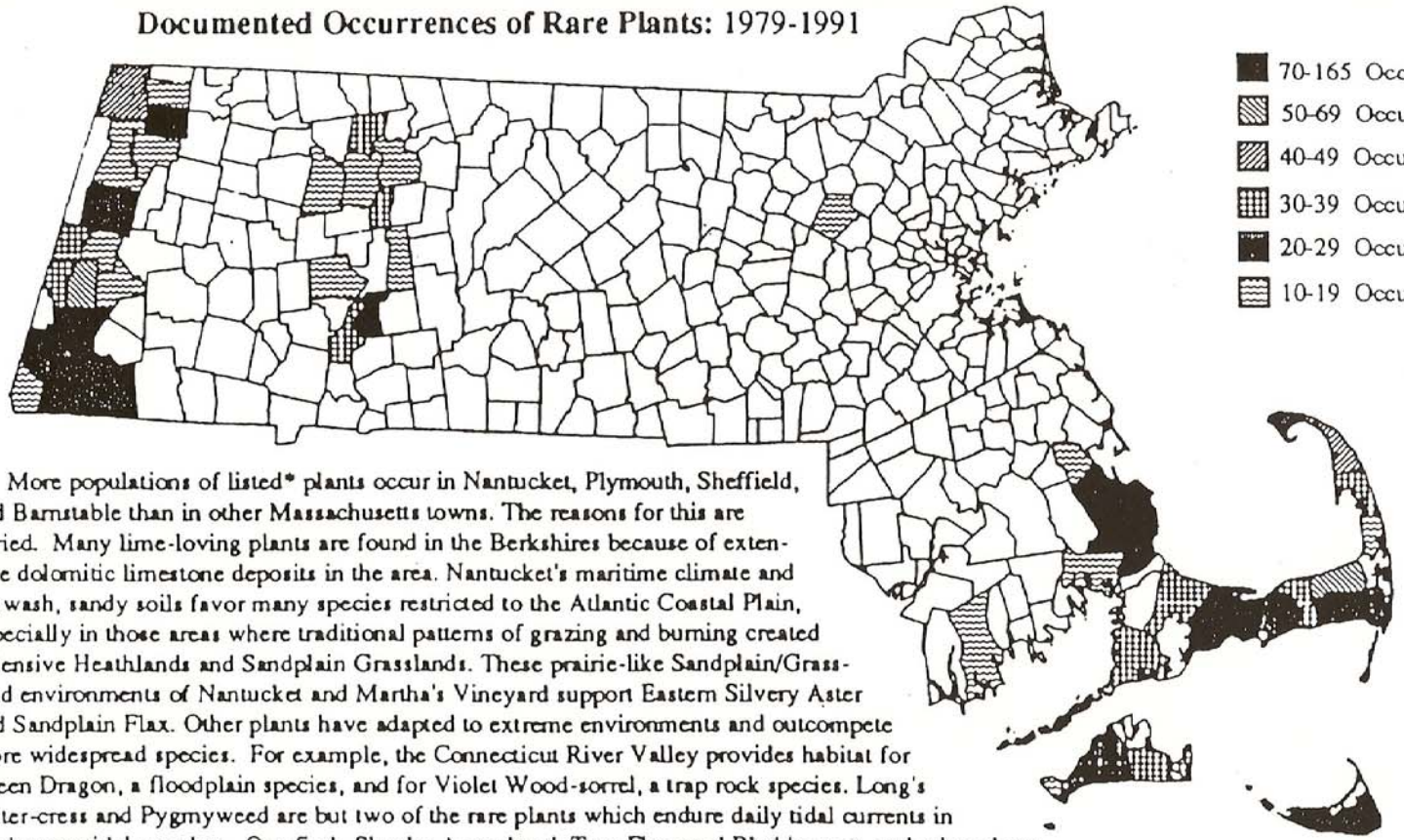
RESOURCE MAPS


Approx. Scale 1 : 1,150,000
FORESTED LANDS OF MASSACHUSETTS
FOREST LAND
OTHER LANDS
PRODUCED BY DFWELE IN COOPERATION WITH MASSGIS ON 2/21/92


Percent of Town Forested
over 80
60-79
40-59
20-39
0-19
Department of Environmental Management
Division of Forests and Parks
Forest Resources Planning Program

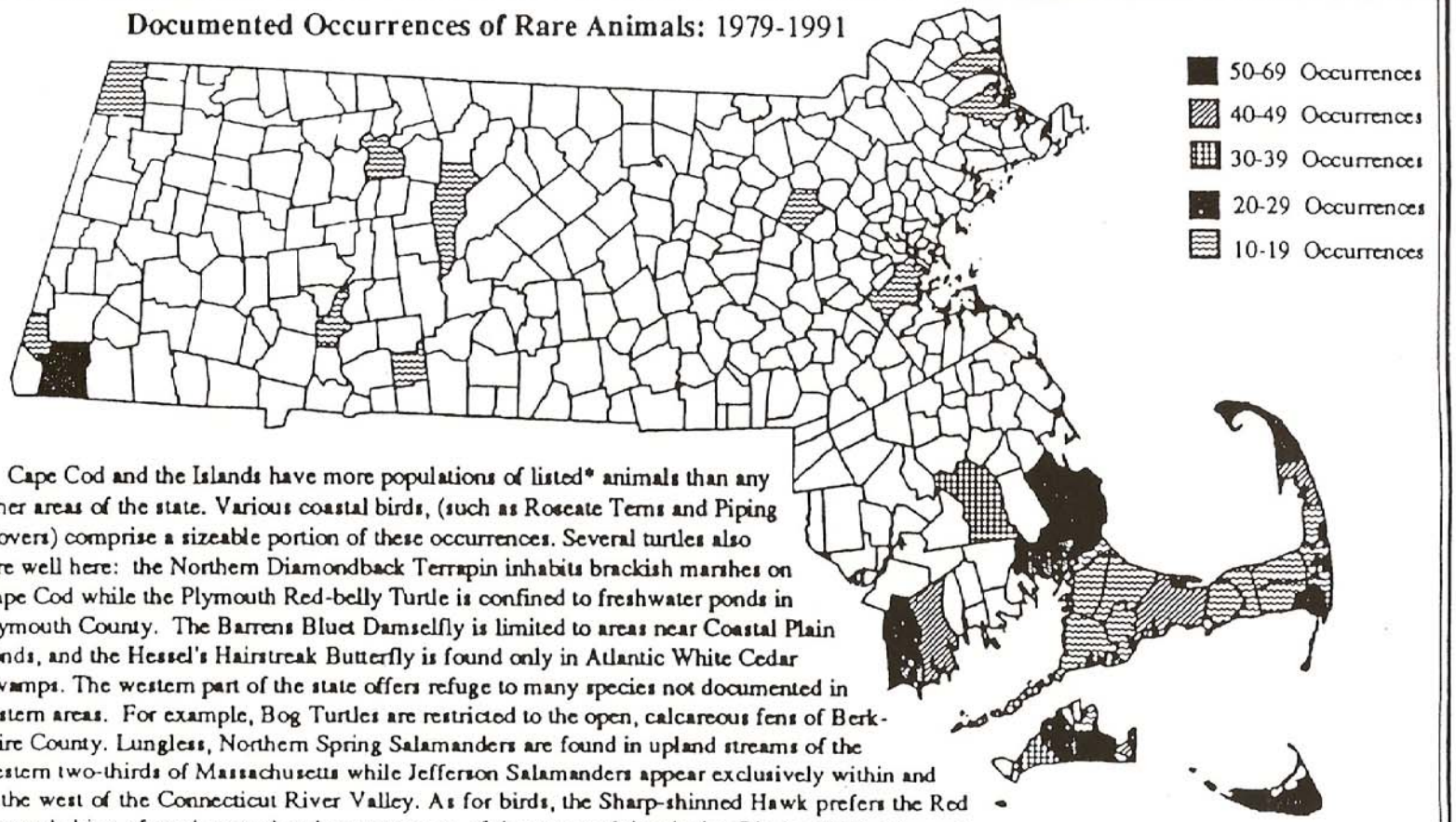

Forested Acres per Person
More than 1 acre of forest per person.
Has 68% of all land and 10% of the people.
More than 0.1 and up to 1.0 acre per person.
Has 30% of all land and 43% of the people.
Zero to 0.1 acre per person.
Has 2% of all land and 47% of the people.
Department of Environmental Management
Division of Forests and Parks
Forest Resources Planning Program

Rare Species in Massachusetts: A Town-by-Town Breakdown From the NHESP Database



More populations of listed* plants occur in Nantucket, Plymouth, Sheffield, and Barnstable than in other Massachusetts towns. The reasons for this are varied. Many lime-loving plants are found in the Berkshires because of extensive dolomitic limestone deposits in the area. Nantucket's maritime climate and outwash, sandy soils favor many species restricted to the Atlantic Coastal Plain, especially in those areas where traditional patterns of grazing and burning created extensive Heathlands and Sandplain Grasslands. These prairie-like Sandplain/Grassland environments of Nantucket and Martha's Vineyard support Eastern Silvery Aster and Sandplain Flax. Other plants have adapted to extreme environments and outcompete more widespread species. For example, the Connecticut River Valley provides habitat for Green Dragon, a floodplain species, and for Violet Wood-sorrel, a trap rock species. Long's Bitter-cress and Pygmyweed are but two of the rare plants which endure daily tidal currents in freshwater tidal marshes. One finds Slender Arrowhead, Two-Flowered Bladderwort, and other plants in Plymouth and on Cape Cod that have adapted to survive the fluctuating water levels and acidic, nutrient-poor waters of Coastal Plain kettle ponds.

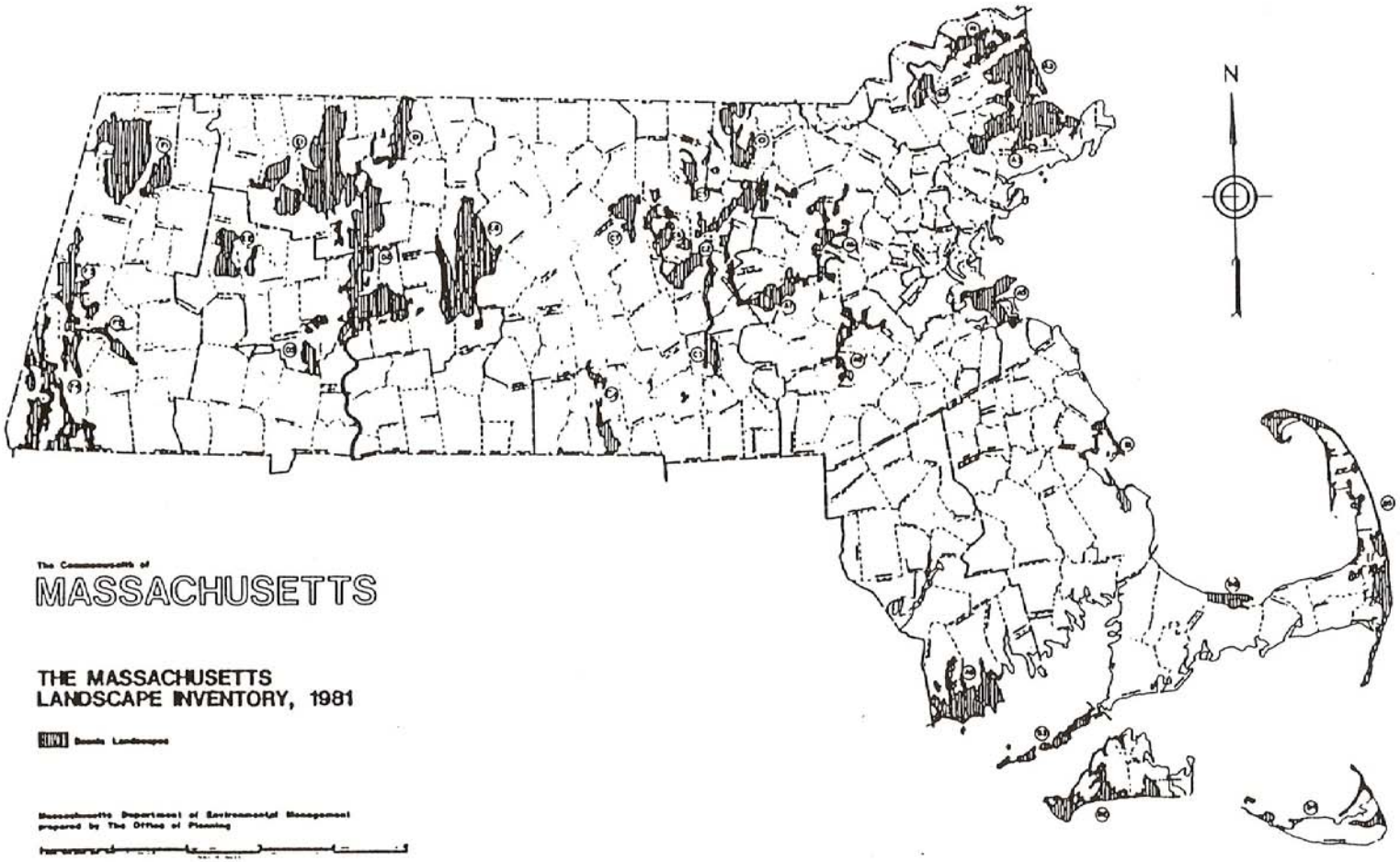
Documented Occurrences of Rare Animals: 1979-1991



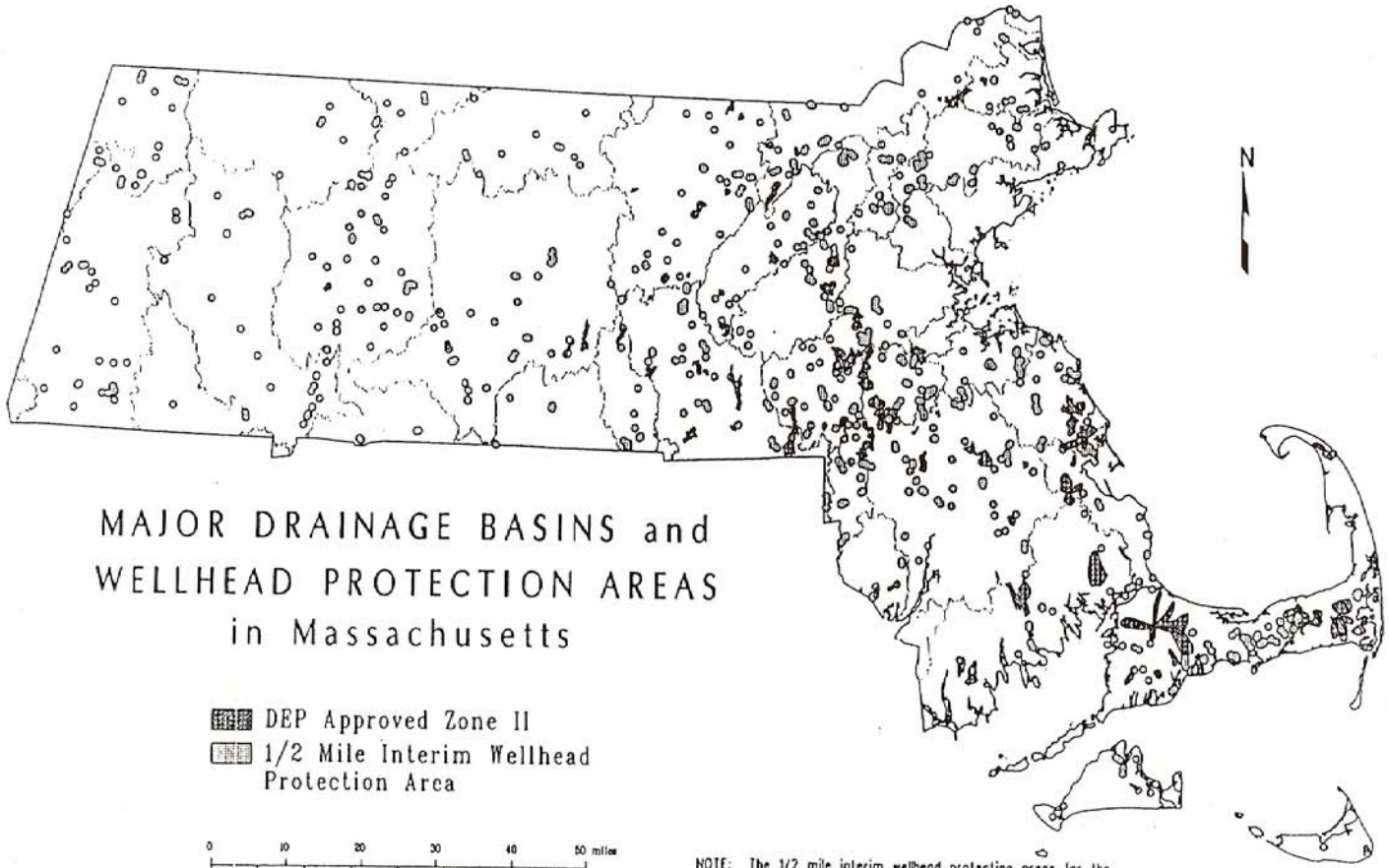
Cape Cod and the Islands have more populations of listed* animals than any other areas of the state. Various coastal birds, (such as Roseate Terns and Piping Plovers) comprise a sizeable portion of these occurrences. Several turtles also fare well here: the Northern Diamondback Terrapin inhabits brackish marshes on Cape Cod while the Plymouth Red-belly Turtle is confined to freshwater ponds in Plymouth County. The Barrens Bluet Damselfly is limited to areas near Coastal Plain ponds, and the Hessel's Hairstreak Butterfly is found only in Atlantic White Cedar Swamps. The western part of the state offers refuge to many species not documented in eastern areas. For example, Bog Turtles are restricted to the open, calcareous fens of Berkshire County. Lungless, Northern Spring Salamanders are found in upland streams of the western two-thirds of Massachusetts while Jefferson Salamanders appear exclusively within and to the west of the Connecticut River Valley. As for birds, the Sharp-shinned Hawk prefers the Red Spruce habitat of north central and western parts of the state and the elusive Blackpoll Warbler nests only in the Spruce-Fir forests of Mt. Greylock and the Berkshire Plateau.

* Listed as Endangered, Threatened or Special Concern by MA Division of Fisheries & Wildlife

Christine Dugan



Map of scenic landscapes of Massachusetts as surveyed in 1981. See Chapter 3 for a detailed explanation of this map.



MAJOR DRAINAGE BASINS and WELLHEAD PROTECTION AREAS in Massachusetts

DEP Approved Zone II

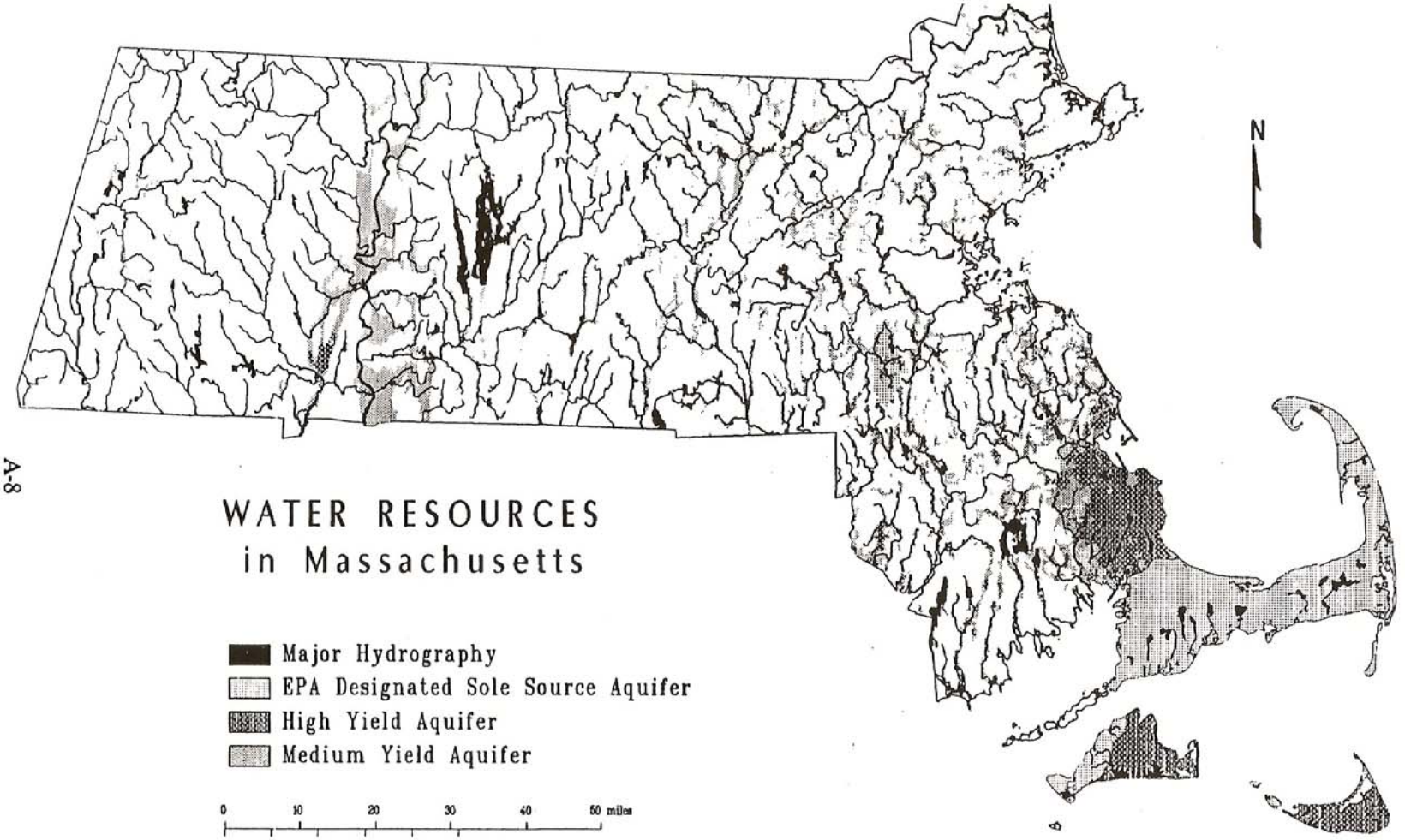
1/2 Mile Interim Wellhead Protection Area

0 10 20 30 40 50 miles

0 10 20 30 40 60 kilometers

NOTE: The 1/2 mile interim wellhead protection areas for the northeast portion of the state are incomplete. MA DEP is in the process of updating this information (and the corresponding community public water supply locations) for its Northeast Region.

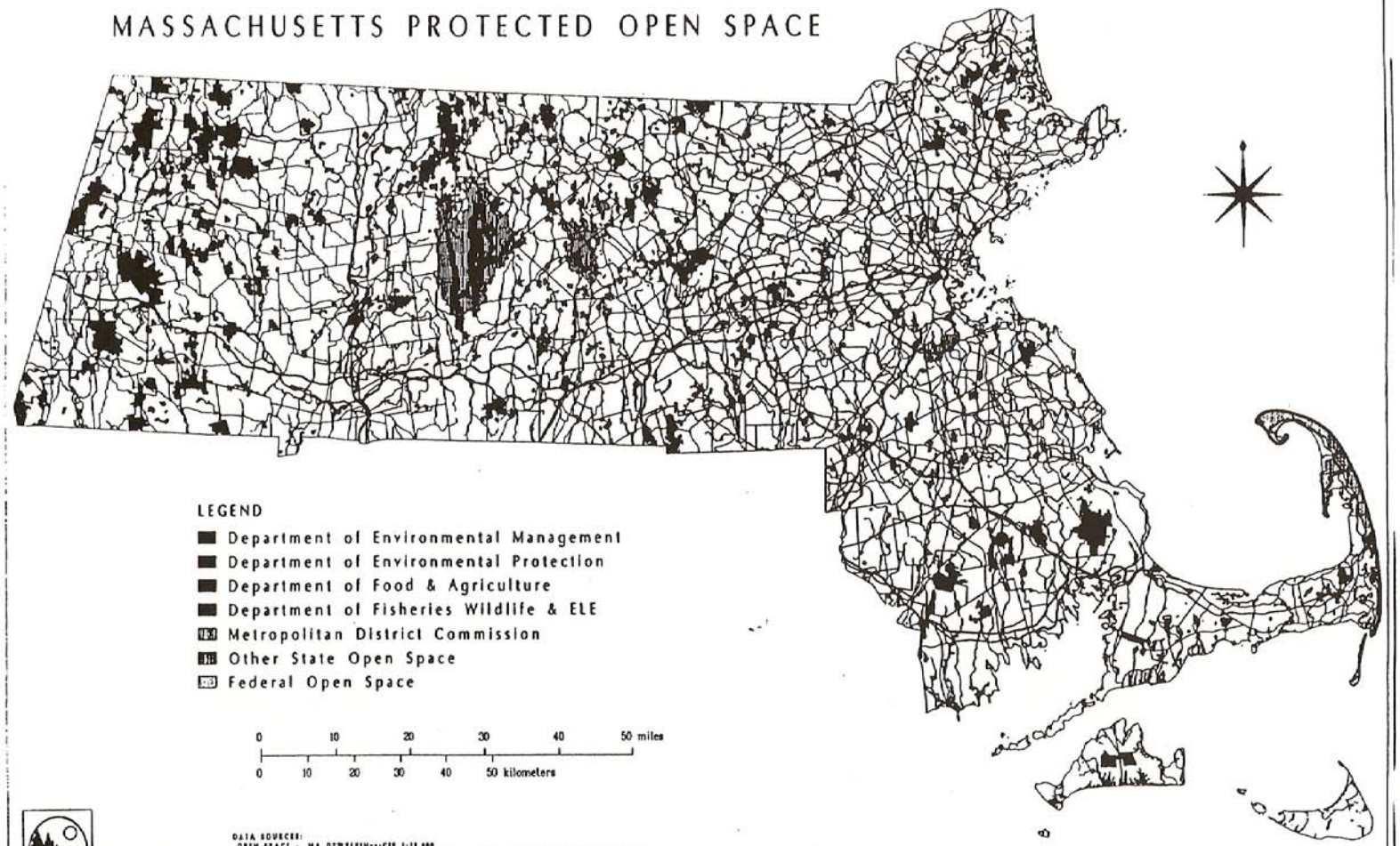
Produced by MassGIS
February 19, 1992



Produced by MassGIS
February 19, 1992

N
ATLANTIC OCEAN
NEW HAMPSHIRE
VERMONT
NEW YORK
MA
RI
CT
OCEAN
ATLANTIC
Boston
Providence
Hartford
New Haven
Worcester
Springfield
Pittsfield
Bridgeport
Stamford
Norwalk
Danbury
New Bedford
Fall River
Warwick
New Britain
Bristol
Quabbin Reservoir
Wachusett
Monadnock
Mohawk
Taconic
Appalachian
Trail
Bay Circuit Trail
Metacomet Monadnock Mattabesett Trail
Pachaug & Narragansett Trails
Southern New England
Wampanoag Trail
Midstate
Tri-State Circuit
Laurentian
Lowell
Framingham
Brockton
Weantinoge
LONG DISTANCE TRAIL IDENTIFICATION:
Existing
Proposed
Hiking
Multi-Use
Major Cities
Major Water Bodies
New York/New England Trails Inventory
NATIONAL PARK SERVICE
A M C
10 0 10 20
Miles
Cartography PAL Digital Geography Laboratory
Salem State College April 1991

MASSACHUSETTS PROTECTED OPEN SPACE



DATA SOURCES:
OPEN SPACE - MA DEM/EEA/MassGIS 1:25,000.
Compiled onto 1:25,000 USGS Quadrangles. Community and locally protected open space are not uniformally available statewide, and therefore are not shown, 1998.
MAJOR ROADS - USGS/MassGIS 1:500,000.
Major roads extracted from USGS DLG transportation files, 1998.
HYDROGRAPHY - USGS/MassGIS 1:500,000.
Major ponds and streams extracted form USGS DLG files, 1985. Updated by MassGIS in 1998.

January 29, 1999

Appendix B

FOREST LEGACY AREA EVALUATION CHECKLIST

Massachusetts Forest Legacy Area Evaluation Checklist

Area: _____

Location: _____ Acres: _____

1. THREATENED BY CONVERSTION TO NON-FOREST	parcels #1	#2	#3	*entire Legacy area*
a. ***Type of threat***				
danger of conversion in less than 5 years				
wooded, but may become further fragmented				
currently on the open market/listed by realtors				
security of 1+ sites now will stem further development.				
remote, but frontage on town road w/good perc. Rate				
not under Ch. 61 or other forest use provisions				
wooded, but danger of high-grading				
other				
SUBTOTAL				
b. ***Factors affecting acquirability***				
owned by willing seller(s)				
owner(s) understands less-than-fee acquisitions				
25% match available (town/state/land trust)				
may be available at below FMV (bargain)				
SUBTOTAL				
-				
2. CONTAINS ONE OR MORE PUBLIC VALUES				
a. ***Scenic resource***				
in MA Landscape inventory as "distinctive" or "noteworthy"				
locally impt. panoramic/shore views				
along designated scenic road				
SUBTOTAL				
b. ***Public recreation opportunities***				
water-based recr: boat/swim/fish/raft/canoe				
trail-based/day use recr: hike/picnic/horseback ride/skate/x-c ski				
nat. res.-based recr: camp/hunt/nature tour				
adjacent land protected (note acreage)				
SUBTOTAL				
c. ***Riparian/hydrologic resources***				
on major river/stream in DEM inventory or DFWELE Adopt-a-Stream				
extensive (over 300') river shoreline				
flood plain/natural valley (groundwater storage/recharge)				
80' min. of trees/shrubs as natural buffer & sediment filter				
contributes to drinking water supply				
wetlands				
SUBTOTAL				
d. ***Fish and wildlife habitat***				
outstanding habitat for one or more ssp. that inlcude:				
forest interior nesting birds				
signif. Pupulations of resident spp.				
neo-tropical migrant spp.				
resting/feeding areas for migratory spp.				
forest inhabiting mamms./repts./amphibs./inverts.				
connective habitats: corridors/linkages/reduces biological isolation				
SUBTOTAL				

	parcels			*entire*
	#1	#2	#3	*Legacy area*
e. ***Known threatened and endangered species***				
plant/animal spp. On MA state list as E.T or Special Concern				
federally listed plant/animal spp.				
connective habitats: corridors/linkages/reduces biological isolation				
SUBTOTAL				
f. ***Known cultural resources***				
recorded archeological site				
historic features				
SUBTOTAL				
-				
g. ***Productive soils (US-SCS Techn. Guide)***				
productive agricultural soils				
productive forest soils				
SUBTOTAL				
h. ***Geology/physiography***				
unique features: Holyoke Range, etc.				
mineral				
SUBTOTAL				
i. ***Other ecological values***				
provides a complex of ecological communities (bio-diversity)				
includes contracting area of ecological communities				
has old-growth forest				
provides immediate watershed/water supply protection				
SUBTOTAL				
3. PROVIDE FOR TRADITIONAL FOREST USES				
continued sugarbush/cordwd/timber mgmt. under Stewardship Plan				
continued watershed/water filtration role				
continued outdoor recr. Opport.				
SUBTOTAL				
-				
4. REGIONAL VALUES				
-				
linkeages for recr., especially connecting public lands				
public access to boating/swimming				
public/private drinking water supply protection				
traditional scenic qualities				
SUBTOTAL				
-				
5. OTHER PROGRAM CONSIDERATIONS				
public visibility				
public support				
first year cost				
five year cost				
parcels #1 - #2 - #3				
lead organization's ability to deliver				
GRAND TOTAL				

EXECUTIVE SUMMARIES
OF
FOREST LEGACY AREA NOMINATIONS

Executive Summary
For
Proposed Massachusetts Forest Legacy Area:

"Stockbridge Yokun Ridge Reserve"

I. MAP

Rever to map and boundary description on pp. D-3 and D-4 of the Assessment of Need.

II DESCRIPTION OF EACH IMPORTANT FOREST AREA

The important forest area constitutes what is locally known as "Yokun Ridge". The forested ridge runs in a north-south direction from Pittsfield in the north to West Stockbridge in the south and includes the Lenox and West Stockbridge Mountains. One key feature is Stevens Glen, a steep and angled cleft surrounded by immense hemlocks. The forested slopes of the ridge are steep and fragile. A second notable hemlock glen lies in the slopes directly behind the Tanglewood Music Festival. This "Shadowbrook Glen" was given its name by Nathaniel Hawthorne.

III SUMAMRY OF IMPORTANT ENVIRONMENTAL VALUES AND HOW (TYPE OF CONSERVATION EASEMENT) THEY WILL BE PROTECTED AND CONSERVED.

A. The ridge frames the best views in Berkshire County and the forests provide a green background for the entire region. The Massachusetts Turnpike skirts the southern tip of the proposed Forest Legacy Area and the ridge serves as a huge gate to Massachusetts from New York. A conservation easement athat acquired development rights would assure that the scenic beauty is retained. In some instances where timber harvesting is feasible, the easements may need to include constraints on harvesting that minimize visual impact while maintaining the use of this resource for forest products.

B. The mountains provide passive recreation to a growing number of people There are opportunities for hiking, horseback riding, cross country skiing, snowshoeing, picnicking, and nature study. It also constitutes a large block of forested land for wildlife habitat. A conservation easement should include public access, particularly along the top of the ridge where scenic trails could be located. A trail system is possible that would connect this area with other trails, such as those in the Pleasant Valley Audubon Sanctuary. One leg of this trail, from the West Stockbridge Mountain overlook above Shadowbrook Glen, to the Legacy Area's southern terminus, is currently in planning stages and the "easy access" loop on this part of the mountain will be constructed in Summer 1993. Acquisitions should consider possible trails when tract-specific management plans and MOUs are prepared.

C. The ridge encompasses important watersheds, wildlife habitats and plant communities. Two municipal water supply watersheds and many private water supplies are located on the slopes. A conservation easement on lands that include these watersheds should include development rights and any other rights required to preserve the watersheds and quality of water emanating from them.

D. Conservation Easements for Tracts should address:

1. Development Rights
2. No motorized access, except that necessary for trail construction and/or maintenance, wildlife habitat improvements and management of rights retained by owners.
3. No excavation of soil or mineral – acquire mineral (hard and common) rights.
4. Possible acquisition of rights limiting timber harvesting practices.

IV. LIST OF PUBLIC BENEFITS TO BE DERIVED

A. Scenic quality
B. Public access for recreation
C. Protection and conservation of wildlife habitat
D. Protection of public water supplies
E. Continuation of traditional forest uses.

V. IDENTIFICATION OF GOVERNMENTAL ENTITY OR ENTITIES THAT MAY BE ASSIGNED MANAGEMENT RESPONSIBILITY

A. Commonwealth of Massachusetts, Department of Environmental Management, Division of Forest and Parks
B. Berkshire County
C. Towns of:

Lenox	Stockbridge
Richmond	West Stockbridge

VI. DOCUMENTATION OF THE ANALYSIS AND PUBLIC INVOLVEMEN TPROCESS

A. Discussions and support of the Forest Legacy Program with the following groups and public officials:
   1. Stockbridge Land Trust
   2. Stockbridge Board of Selectmen
   3. Richmond Land Trust
   4. West Stockbridge Conservation Commission
   5. Board of Selectmen of the Town of Lenox
   6. State Representative Christopher Hodgkins
   7. State Senator Jane Swift
   8. Congressman Chester Atkins

B. Public support for the Yokun Forest Reserve shown by:
   1. Acquisitions by Town of Lenox and Stockbridge for watershed protection.
   2. 1,150 acre preserve established by the Massachusetts Audubon Society
   3. Acquisitions over the past 20 years by the Berkshire County Land Trust and Conservation Fund, including fee simple and conservation easements, totaling 435 acres.
   4. 350 acre acquisition, Kennedy Park, by the Town of Lenox.

5. Letter of support from Governor William F. Weld.
6. Active congressional support by Congressman Chester atkins that resulted in authorization of Forest Legacy funds to the State of Massachusetts in the FY 1992. Appropriations upon completion of the AON and approval by the U.S. Secretary of Agriculture

C. Public announcements
    1. Article by Robert Braile on "Mass. Forests to include in US preservation program" in The Boston Globe, Saturday, November 9, 1991 specifically mentioned Yokun Ridge Forest Reserve as a proposed Forest Legacy Area.
    2. Press release by Congressman Atkins to newspapers throughout Massachusetts on October 30, 1991, announcing that Massachusetts was eligible for Forest Legacy funds upon completion of the Assessment of Need.
    3. Article by Lori Thompson on "$900,000 in federal forestry funds to protect Yokun Ridge Reserve in The Advocate-South, March 17, 1993, specifically focused on the Forest Legacy Program.
    4. article by Derk Gentile on "U.S. to spend up to $1 million to protect ridge" in The Berkshire Eagle, March 21, 1993 talks about protecting the 6,500 acre Yokun Ridge Reserve with Forest Legacy dollars.
    5. Editorial, "Protecting Yokun Ridge", in The Berkshire Eagle, March 21, 1993 supports protection through "a federal preservation program" [Forest Legacy].

D. This proposed Forest Legacy Area meets the eligibility criteria for a Forest Legacy Area as follows:
    1. Forests are threatened by immediate and future conversion to non-forest, house lots.
    2. Individual landowners have been approached about selling conservation easements and are interested in selling easements.
    3. Scenic resources are recognized as distinctive and include a well-traveled entrance-way into the state – the Massachusetts Turnpike.
    4. Public has traditionally utilized the area for recreation and there are opportunities to develop a trail system that would like up with other trails in the area.
    5. Two public water supplies lie within the Area as well as many private water sources – protection of water supply sources.
    6. Forested ridge has served as an important wildlife habitat in that it is relatively undisturbed large block of forest land.
    7. The soils on the slopes of the ridge are fragile and physical disturbance would result in adverse environmental impacts such as soil erosion.
    8. The large hemlocks surrounding Stevens Glen and Shadowbrook Glen are unique and warrant preservation and management.

No objections were received from the local communities and the individuals following Congressional news releases, newspaper articles or when queried about the establishment of the Yokun Ridge Forest Reserve as a Forest Legacy Area.

Executive Summary
For
Proposed Massachusetts Forest Legacy Area:

"Estabrook Woods"

I. MAP

Refer to map and boundary description on pp. D-5 and D-6 in the Assessment of Need.

II. DESCRIPTION OF EACH IMPORTANT FOREST AREA.

This important forest area is known locally and historically as "The Estabrook Woods." It is a suburban forest about 19 miles northwest of Boston and lies within the two historic towns of Concord and Carlisle. Its 2,000 forested acres are a green island amidst a sea of development – probably its most important feature. Estabrook Woods is zoned principally for residential use and the exploding population of greater Boston poses an immediate threat of permanently converting Estabrook Woods to non-forest uses. These woods are eloquently described by Henry David Thoreau in his Journals of 1857.

III. SUMMARY OF IMPORTANT ENVIRONMENTAL VALUES AND HOW (TYPE OF CONSERVATION EASEMENT) THEY WILL BE PROTECTED AND CONSERVED.

A. The Estabrook Woods have visual value to scores of local commuters who commute daily into and around greater Boston. Conservation restrictions would go a long way toward assisting in the protection of woodlands, fields and indigenous wildlife. These restrictions and resulting forest management programs may need to be carefully tailored to enhance these biotic and abiotic resources.

B. Many archaeological and historic resources associated with the Revolutionary war are found therein. The protection of these resources will undoubtedly have to be considered in both conservation easements and the Stewardship Plan. Access to these will also have to be addressed in easement negotiations, since they are of interst to national and international tourists and contribut to the area's economy.

C. The Estabrook Woods has much ecological significance. It lies entirely within the Concord River watershed which also includes the nearby Great Meadows National Wildlife Refuge. Several ponds and extensive wetlands are located within the natural boundaries of the Woods. In addition, Sawmill Brook, one of Concord's purest, originates within the Woods. The Estabrook Woods supports a diversity of rare and endangered plants and animals identified by the Massachusetts Natural Heritage Program. Conservation easements will need to address the protection and management of these threatened habitats.

D. Harvard University's Museum of Comparative Zoology owns approximately 675 acres of forest land in the core of the Woods. Traditionally, this land has been used for biological teaching and research, yet it has no legal or permanent protection from development of conversion to non-forest use. At the same time easements from adjacent, private landowners are being pursued, Harvard will be approached regarding their long term intentions for the Woods. Forest Legacy monies would be well spent by setting appropriate examples of responsible land stewardship through protection efforts with adjacent landowners, thereby encouraging Harvard to do the same.

E. Conservation Easements for tracts should address:

1. Development rights.
2. Controlled public access to archaeological and historic sites and cultural resources.
3. No motorized access, except that necessary for trail construction and/or maintenance, wildlife habitat improvements and management of rights retained by owners.
4. No excavation of minerals including sand, gravel and stone.
5. Possible acquisition of rights to practice extensive rather than intensive forest management.
6. Possible acquisition of rights to protect the aesthetics of the Forest Legacy Area.

IV. LIST OF PUBLIC BENEFITS TO BE DERIVED

A. Permanent protection for this significant mass of existing contiguous, open space which to date, has been largely preserved in its original state.
B. Aesthetics and scenic quality.
C. Public access for passive recreation
D. Protection and conservation of wildlife habitat including rare and endangered species habitat.
E. Protection of water quality.
F. Continuation of limited traditional forest uses.
G. Continuation of environmental education and research programs through local public and private schools.

V. IDENTIFICATION OF GOVERNMENTAL ENTITY OR ENTITIES THAT MAY BE ASSIGNED MANAGEMENT RESPONSIBILITY.

A. Commonwealth of Massachusetts, Department of Environmental Management, Division of Forests and Parks.
B. Towns of Concord and Carlisle
C. Middlesex County

VI. DOCUMENTATION OF THE ANALYSIS AND PUBLIC INVOLVEMENT PROCESS.

A. Discussions and support of the Forest Legacy Program with the following groups:

1. Concord Land Conservation Trust
2. Town of Concord Natural Resources Commission
3. Town of Concord Conservation Commission
4. Town of Carlisle Conservation Commission
5. Harvard University Museum of Comparative Zoology
6. Middlesex School (private high school)
7. Town of Concord Board of Selectmen
8. Town of Carlisle Board of Selectmen
9. Former Congressman Chester Atkins
10. Thoreau Country Conservation Alliance
11. Walden Woods Project

B. Public support for Estabrook Woods shown by:

1. Within the Town of Concord, the Concord Land Conservation Trust owns in fee and manages 480 acres, and holds conservation restrictions on an additional 220 acres. These holdings include approximately 46 acres within Estabrook Woods.
2. The Concord Open Land Foundation, the land acquisition arm of the Land Trust, is pursuing protection of the Woods with major adjacent landowners. Having completed a 13.5 acre project in 1989, this group is currently pursuing three additional projects on the periphery of the Woods.
3. Both the towns of Concord and Carlisle own significant tracts within the confines of the Woods. Between the two towns, approximately 185 acres are either held in fee or protected through conservation restrictions.
4. Town of Carlisle, Board of Selectmen and the Conservation Commissioners.
5. Carlisle Land Trust.
6. Town of Concord, Board of Selectmen.
7. Harvard University, Concord Field Station, owns 675 acres in the center of the proposed Estabrook Woods Forest Legacy Area and supports protection.
8. Letter from Scott T. Evans for the Evans (family) Farm comprising 50 acres of developable land in the Estabrook Woods FLA supports Legacy.
9. Letter from Charles Wyman of the Massachusetts Trustees of Reservations to Massachusetts Land Conservation Trusts.
10. Letter from Susan S. Tierney, then Secretary, Massachusetts Executive Office of Environmental Affairs, to Congressman Chester G. Atkins.

C. Public Announcements

1. News article by Robert Braile, "Mass. Forests to be included in U.S. preservation program", The Boston Globe, November 9, 1991 highlights the Forest Legacy Program.

2. News release by Congressman Chester Atkins, "New Forest Preservation Initiative Begun; Atkins Wins Funds for Massachusetts", October 30, 1991 talks about Forest Legacy Program.
3. News release by Congressman Chet Atkins, "Atkins insures conservation of forest resources", March 10, 1992, addresses the need to conserve the 16 proposed areas under the Forest Legacy Program including Estabrook Woods.
4. Editorial by Perry R. Hagenstein, Past President of American Forestry Association and an eastern Mass. Resident, "Get behind the Forest Legacy program", in American Forests magazine, December 1991.
5. News article by Owen Andrews, "Estabrook Woods may be included in federal program", in the Carlisle Mosquito (weekly newspaper), June 5, 1992, emphasizes the support of Carlisle Selectmen for conserving Estabrook Woods through the Forest Legacy Program.
6. News article by Dona Eaton, "Estabrook Woods denied funding this time around", in the Carlisle Mosquito, June 26, 1992 discusses the $84,000 Forest Legacy allocation to the western Mass. FLAs.

D. This proposed Forest Legacy Area meets the eligibility criteria for a Forest Legacy Area as follows:
    1. Forests are threatened by immediate and future conservation to non-forest, house lots.
    2. Individual landowners, like the Evans family, have been approached about selling conservation easements and are interested in selling easements.
    3. Scenic resources are recognized by the State of Massachusetts as distinctive and include well-traveled commuter routes.
    4. Public has traditionally utilized the area for passive recreation and there are opportunities to maintain existing trail systems.
    5. Private wells and water sources lie within the Area – protection of water supply sources.
    6. Contains several wetlands that are habitat to rare plant species.
    7. The "Woods" has the remains of many farmhouses, outbuildings, mills, a limestone quarry and other historic sites. The historic line of march for many of the Revolutionary War "Minutemen" in 1775 lay throughout these woods.

E. Immediate Threats to Estabrook Woods:

Following the failure of the Estabrook Woods to secure monies in the first round of the Forest Legacy Program, several situations which threaten the integrity of the woods have emerged.

1. Middlesex School has begun plans to extend its campus further into previous undeveloped portions of the Woods. Discussions regarding permanent protection of this land between the Town of Concord, local conservation groups and the school are ongoing.

2. The Evans (Farm), our primary acquisition target in the first round have proceeded to make plans to develop their property. Their land has been shown to several developers and various bids have been discussed. Their current plan calls for two phases of development. Phase 1 consists of carving our four 2.5 acre house-lots which would be sited on the interior of the property. Phase 2 calls for further such discussions regarding construction of a 30 unit condo/apartment complex along the southern boundary of the property. This phase is particularly disturbing as the project would be located directly adjacent to the Harvard holdings – the very heart of the Woods. Despite these plans, the Evans eagerly await non-development alternatives (such as Forest Legacy) however, the opportunity to save this critical parcel may be short lived.

No objections were received from the local communities and individuals following Congressional news releases, newspaper articles or when queried on establishing Estabrook Woods as a Forest Legacy Area.

Executive Summary
For
Proposed Massachusetts Forest Legacy Area:

"Connecticut Valley Forest Legacy Area"

I. MAP

Refer to map and boundary descriptions on pp. D-7 and D-8 of the Assessment of Need.

II. DESCRIPTION OF EACH IMPORTANT FOREST AREA

Two important forest areas are within this proposed FLA and are locally known as the "Holyoke Range" and the "Western Valley Watersheds."

A. The "Holyoke Range" is one of the few mountain ranges in the world that runs in an east-west direction. The proposed legacy area includes the Holyoke Range State Park under the jurisdiction of the Massachusetts Department of Environmental Management. Key features include scenic resources, public recreation and extensive wildlife habitat including vernal pools, breeding areas for rare and endangered amphibians.

B. A water-rich forested area, the "Western Valley Watersheds", contains aquifer recharge zones and watersheds for two public water supplies. It also has a black bear population of statewide significance, vernal pools and a number of perennial brooks. The entire area is classified as "prime or state-important forestland soils" for white pine and red oak.

III. SUMMARY OF IMPORTANT ENVIRONMENTAL VALUES AND HOW (TYPE OF CONSERVATION EASEMENT) THEY WILL BE PROTECTED AND CONSERVED.

A. Within the Holyoke Range subunit of the Holyoke Range State Park provides a core of protected land along the mountain range with state and town ownership amounting to about 3500 acres. However, it is something of a "biological island" in that it does not connect with the Connecticut River, and its edges in many instances are vulnerable to fragmentation and intrusion by development. Currently available for Forest Legacy Area status are four tracts comprising 156 acres. These tracts connect to the River to the park (i.e. link foot trails and secure wildlife corridors), provide protection to woodland and archeological artifacts, and enlarge the amount of riparian and floodplain forest under protection (habitat for about 120 species of songbirds).

B. The Western Valley Watershed unit lies approximately three miles west of the Connecticut River and comprises a north-south trending area from Whately to Northampton. It includes the sole-source surface water supply area for the town of Hatfield, and is the primary supply for the city of Northampton at its Mt. Street Reservoir. The area is also one of the most significant black bear habitats in the state, due to good oak stands, and numerous interspersed wetlands. Approximately 800 acres of the area are already protected by both communities. Hatfield has entered into a contract to conduct a shelterwood harvest on its 300 acre watershed which is estimated to bring in $80,000

C. earmarked by the town for acquisition/protection of several highly vulnerable parcels, including one which forms part of the reservoir headwaters. Northampton's reservoir (the two are not far apart) has recently benefited from a 150 acre conservation restriction (CR) secured by the Hilltown Land Trust and more CRs are probable. Overall, this proposed Forest Legacy Area might comprise over 3000 acres, but the acquisition of a few key tracts at this time would prevent severe intrusive development by consolidating protection for the watershed.

D. Conservation Easements for tracts should address:

1. Development Rights
2. No motorized access, except that necessary for trail construction and/or maintenance, wildlife habitat improvements and management of rights retained by owners.
3. No excavation of minerals including sand, gravel and stone
4. Public access for passive recreation and to riparian areas.
5. Possible acquisition of rights to protect the aesthetics of the FLA.
6. Possible acquisition of rights to practice forest management that enhances potable water and wildlife habitats.
7. Continuation of traditional forest uses.
8. Protection of forested watersheds

IV. LIST OF PUBLIC BENEFITS TO BE DERIVED

A. Scenic quality
B. Public access for recreation
C. Protection and conservation of wildlife habitat
D. Protection of public water supplies
E. Continuation of traditional forest uses.

V. IDENTIFICATION OF GOVERNMENTAL ENTITY OR ENTITIES THAT MAY BE ASSIGNED MANAGEMENT RESPONSIBILITY

A. Commonwealth of Massachusetts, Department of Environmental Management, Division of Forest and Parks.
B. Hampshire and Hampden Counties
C. Towns of:

Hatfield	Hadley
Northampton	South Hadley
Amherst	

VI. DOCUMENTATION OF THE ANALYSIS AND PUBLIC INVOLVEMENT PROCESS

A. Discussions with and support for the Forest Legacy Program with following groups:

1. Mass. DEM – land acquisition staff
2. Connecticut River Watershed Council
3. Valley Land Fund
4. Town of Hatfield: Selectmen and Water Commissioners
5. Town of Amherst – Conservation Commission
6. Town of S. Hadley – Conservation Commission
7. Mass. Audubon Society
8. U.S.D.I. Cooperative Wildlife Research Unit, Univ. of MA, Amherst
9. U.S. Fish and Wildlife Service
10. The Hilltown Land Trust
11. The Appalachian Mountain Club

B. Public support for the two proposed Forest Legacy subunits shown by:

1. Acquisition by the Commonwealth of Massachusetts, Depart of Environmental Management of 300 acres for extensive recreation.
2. Acquisition by the towns of Hatfield and Northampton for watershed/water supply protection.
3. Letter of support from Governor William F. Weld.
4. Congressional support from Congressman John Olver (D-Amherst).
5. Active congressional support by Congressman Chet Atkins that resulted in authorization of Forest Legacy funds to the State of Massachusetts in the FY 1992. Appropriations upon completion of the AON and approval by the U.S. Secretary of Agriculture.
6. Request (memo) from The Valley Land Fund to Congressman John Olver requesting his support for the Forest Legacy Program.

C. Public Announcements

1. News article by Stan Feeman on "Fragmentation of forest land threatens quality of resources" in the Springfield Union-News, September 13, 1991 promotes woodland retention.
2. News article by Fred Contrada on "Forest preservation program may reverse state's loss of woodlands" in the Springfield Sunday Republican, January 5, 1992, talks about the Forest Legacy Program and the two sub-units in question.
3. The Mass. DEM and The Valley Land Fund initiated public participation in the selection and nomination of Forest Legacy Areas in the Connecticut River Valley.

    a. In the Holyoke Range unit, individuals and officials from the towns of South Hadley, Amherst and Hadley recommended particular areas and indicated support; individual landowners requested that their properties be considered.

b. In the Western Valley Watersheds unit, which involves towns of Northampton and Hatfield, the planning and conservation commissions were involved in recommending priority sites. Hatfield Water Commissioners stated that they desire to increase the size of their watershed that is in the proposed Forest Legacy unit. Willing sellers of CRs have been forthcoming in their desire to participate.

C. The proposed Forest legacy Sub-units meet the eligibility criteria for a Forest Legacy Area as follows:

1. Forests are threatened by immediate and future conversion to non-forest, house lots.
2. Individual landowners have been approached about selling conservation easements and are interested in selling easements.
3. Scenic resources in both units are recognized as distinctive and are visible from the well-traveled route I-91.
4. Public has traditionally utilized both areas for recreation and there are opportunities to extend development of trail systems, especially in the Holyoke Range.
5. Private wells and water sources lie within both units – protection of water supply sources.
6. Contain habitat for black bears and migratory songbirds.

No objections were received from the local communities and individuals following Congressional news releases, newspaper articles, public information meetings or when queried on establishing Holyoke Range and Western Valley Watersheds as Forest Legacy Areas.

Executive Summary
For
Proposed Massachusetts Forest Legacy Area:

"North Quabbin Corridor Forest Legacy Area"

I. MAP

Refer to maps and boundary descriptions on pp. D-9 through D-12 of the Assessment of Need.

II. DESCRIPTION OF EACH IMPORTANT FOREST AREA

Two important contiguous forest areas are within this proposed FLA and are locally knowna s the "North Quabbin Corridor". Both areas (Phases I and II) are part of a 50-mile corridor of protected land that spans 10 towns and 80,000 acres. Forest products are imported to the economy of these areas since most of the people of this region are employed directly or indirectly in forest-based industries.

A. Phase I focuses on corridor protection and traditional forest uses that support the local rural economy. This forested area abuts the 85,000 acre Quabbin Reservation surrounding the reservoir that supplies drinking water to 2.5 million people in 45 Metropolitan Boston cities and towns.

B. Phase II continues the corridor by connecting various publicly (federal and state) and privately protected lands. This area fosters the more traditional forest uses – summer and winter outdoor/recreational activities. It also harbors aquifer recharge zones.

III. SUMMARY OF IMPORTANT ENVIRONMENTAL VALUES AND HOW (TYPE OF CONSERVATION EASEMENT) THEY WILL BE PROTECTED AND CONSERVED.

A. Within the Phase I subunit, Harvard Forest (Harvard University) serves as a long-term ecological research station for forest research with worldwide impacts. Most private woodlands are classified under Massachusetts Forest Taxation Law (M.G.L. Ch.61). These forested tracts are managed for forest products under a 10-year plan approved by the State Forester. Protection of this area will facilitate recreational uses and insure water quality, particularly since its ponds and streams drain into the Quabbin Reservoir. Furthermore, most private tracts are linkages to publicly protected properties.

Currently available for Forest Legacy Area status are nearly 2,000 wooded acres. These tracts connect the Route 2 (Mohawk Trail) corridor through Harvard Forest, and provide protection to woodlands, productive forest soils and historic sites of the famous Shays' Rebellion.

B. Forty percent of Phase II is compromised of larger tracts of permanently protected public and private lands are in traditional forest uses with 30-40 percent classified under M.G.L. Ch. 61.

Further protection of woodland in this area under the Forest Legacy Program ensures continued availability of the goods and services which bolster this area's rural economy. Both Phases contain rare and endangered species of plants and animals, plus about 10,000 acres of presently protected land.

D. Conservation Easements for tracts should address:

1. Limited development for industrial, commercial and residential uses.
2. Limited motorized access, except that necessary for trail construction and/or maintenance, wildlife habitat improvements and management of rights retained by owners.
3. Limited excavation of soil or minerals, including sand, gravel and stone.
4. Public access for recreation.
5. Acquisition of rights to protect the aesthetics of the FLA
6. Acquisition of rights to practice forest management.
7. Continuation and enhancement of traditional forest uses and protection of forest types.
8. Protection of forested watersheds.
9. Protection of rare and endangered species and habitats.

IV. LIST OF PUBLIC BENEFITS TO BE DERIVED

A. Continuation of traditional forest uses.
B. Protection of public water supplies.
C. Protection and conservation of wildlife habitat.
D. Protection of rare and endangered plants and animals.
E. Public access for recreation (hiking trails).
F. Scenic quality (Route 2 – The Mohawk Trail)
G. Ecological research.

V. IDENTIFICATION OF GOVERNMENTAL ENTITY OR ENTITIES THAT MAY BE ASSIGNED MANAGEMENT RESPONSIBILITY

A. U.S. Army Corps of Engineers
B. Commonwealth of Massachusetts: Division of Forest and Parks; Division of Fisheries and Wildlife; Metropolitan District Commission
C. Franklin and Worcester Counties
D. Towns of:

Petersham	Phillipston	Orange
New Salem	Royalston	Warwick
Athol	Templeton	Winchendon

VI. DOCUMENTATION OF THE ANALYSIS AND PUBLIC INVOLVEMENT PROCESS

A. Discussions with and support for Forest Legacy with the following groups:
   1. Mass DEM – land acquisition staff

2. Millers River Watershed Council
3. Mt. Grace Land Conservation Trust
4. Town of Athol – Conservation Commission
5. Town of Warick– Conservation Commission
6. Town of Orange– Conservation Commission
7. Town of Petersham– Conservation Commission
8. Town of Phillipston– Conservation Commission
9. Massachusetts Div. of Fisheries and Wildlife
10. Metropolitan District Commission
11. The Harvard Forest
12. Mass. Audubon Society
13. The Monadnock Conservancy (N.H.)
14. The Friends of Pisgah (Pisgah State Park, N.H.)
15. Metacomet – Monadnock Trail Committee

B. Public Support for the two proposed Forest Legacy subunits shown by:

1. Acquisition by the Commonwealth of Massachusetts, Div. of Fisheries and Wildlife of about 1,000 acres for wildlife habitat protection and public access.
2. Pre-acquisitions by Mt. Grace Land Conservation Trust for Mass. State agencies.
3. Letter of Support from Governor William F. Weld.
4. Congressional support from Congressman John Olver (D-Amherst).
5. Active congressional support by Congressman Chester Atkins that resulted in authorization of Forest Legacy funds to the State of Massachusetts in FY 1992. Appropriations upon completion of the AON and approval by the U.S. Secretary of Agriculture.
6. Request from Mt. Grace Land Conservation Trust to Congressman Chester Atkins requesting his support for Forest Legacy.
7. Letter (3-10-92) from Mt. Grace Land Conservation Trust to Congressman Sidney Yates, Char-House Appropriations, Interior Subcommittee, for his support in funding the Forest Legacy Program.
8. Letter from Mr. Ted Hutchinson, forest owner in Phase I, requesting consideration for inclusion in FLP.
9. Personal communication of woodland owner, Don Wilson, with Congressman Atkins thanking him for his strong support for Forest Legacy and his successful effort in making Massachusetts eligible for FY '92 Legacy monies.
10. Continued negotiations by Mt. Grace Land Conservation Trust with Harvard Forest for a conservation restriction on its entire 2,000 acres.

C. Public announcements

1. News article by Stan Freeman on "Fragmentation of forest land threatens quality of resources" in the Springfield Union-News, September 13, 1991, promotes woodland retention.

2. News article by Fred Contrada on "Forest preservation program may reverse state's loss of woodlands" in the Springfield Sunday Republican, January 5, 1992, talks about the forest Legacy Program in western Massachusetts.
3. News article by Bradford Miner on "Green corridor: doors opening" in the Worcester (MA) Telegram and Gazette, March 23, 1992, talks about a greenway connecting the Quabbin Reservation (MA) with Mt. Monadnock (NH).
4. Mt. Grace LCT Newsletter (Spring '93) features an article on the proposed North Quabbin Corridor Forest Legacy Area.
5. Article by Robert Braile on "Mass. Forests to be included in US preservation program" in The Boston Globe, Saturday, November 9, 1991, specifically mentioned the Forest Legacy Program.
6. Press release by Congressman Atkins to newspapers throughout Massachusetts on October 30, 1991, announcing that Massachusetts was eligible for Forest Legacy funds upon completion of the Assessment of Need.
7. Editorial by Perry R. Hagenstein, Past President of American Forestry Association and Mass. Resident, "Get behind the Forest Legacy program", in American Forest magazine, December 1991.
8. "Historical patterns of land protection in north central Massachusetts: The emergence of a greenway", by Alisa Dian Gollodetz, discusses patterns of land protection that developed into the North Quabbin Corridor (a Harvard University February 1993 Bachelor's thesis).

D. This proposed Forest Legacy Area meets the eligibility criteria for a Forest Legacy Area as follows:

1. Forests are threatened by immediate and future conversion to nonforest house lots.
2. Individual landowners have been approached about selling conservation easements and are interested in selling easements; three are committed to sell 1,350 acres.
3. Scenic resources are important to tourism along the Mohawk Trail (Route 2).
4. Public has traditionally used landsin the "corridor" for recreation and there are opportunities to extend development of trail systems, especially the Metacomet – Monadnock Trail from Metacomet Mountain in Connecticut to Mt. Monadnock in New Hampshire.
5. Private wells and water sources lie within both Phases – protection of water supply resources.
6. Contain habitat for bobcats, black bear, blad eagles and several rare and endangered flora and fauna.
7. Both Phases, part particularly Phase I is important to protecting the drinking water supply for Greater Boston.
8. Long-term ecological research at Harvard Forest will benefit the earth and humanity.

E. Threats to the North Quabbin Corridor

1. The area had undergone tremendous developmental pressure during the development boom of the last decade.

2. Close proximity to Route 2 enhances commuter access and the town of Petersham remains a particularly desirable area for housing.

No objections were received from local communities and individuals following Congressional news releases, newspaper articles, discussions with town officials or when queried on establishing the North Quabbin Corridor as a Forest Legacy Area. In fact, several inquiries were made by interested and "willing" landowners.

Executive Summary
For
Proposed Massachusetts Forest Legacy Area:

"Nashua River Greenway Forest Legacy Area"

I. MAP

Refer to maps and boundary descriptions on pp. D-13 through D-18 of the Assessment of Need.

II. DESCRIPTION OF EACH IMPORTANT FOREST AREA

A. Three important forest areas are within this proposed Forest Legacy Area (FLA) that is known as the "Nashua River Greenway". The three sections are the "North Nashua/Cook Conservation FLA" (Section I), "Pepperell-Dunstable FLA" (Section II) and "Squannacook Confluence FLA" (Section III).

B. These three sections were chosen because presently they are three of the largest unprotected forested areas in the Greenway, a part of the 538 square mile Nashua River Watershed of which 450 square miles are in the Bay State.

C. The Nashua River, one of the major rivers in the Commonwealth, rises in the Wachusett Reservoir in Clinton/Boylston, and flows north where it joins the Merrimack River in Nashua, NH. The Merrimack River is a focus of attention by the U.S. Environmental Protection Agency (EPA).

D. The goal of the Greenway is to permanently protect the natural resource values and beauty of the Nashua River and its major tributaries, the Squannacook, Nissitssit and Stillwater Rivers. Over the past two decades, more tan 84 miles of riverbanks have been conserved, compromising over 7,400 acres of land. People are encouraged to quietly enjoy these beautiful lands.

III. SUMMARY OF IMPORTANT ENVIRONMENTAL VALUES AND HOW (TYPE OF CONSERVATION EASEMENT) THEY WILL BE PROTECTED AND CONSERVED.

A. Section 1: North Nashua/Cook Conservation Forest Legacy Area: expands the protected riparian corridor; links existing protected greenway lands or other protected lands such as the Leominster and Lancaster State Forests and the Cook Conservation Area; addresses habitat fragmentation and enlarges the acreage of protected riparian and floodplain forest; maintains open-space in an area with high development potential because of its close proximity to the cities of Leominster and Fitchburg; abuts area targed for potential expansion of the Oxbow National Wildlife Refuge.

B. Section 2: Pepperell-Dunstable Forest Legacy Area is the northern-most link of the Greenway between protected areas to the south in the town of Groton and those extending to the New Hampshire state line. It includes the Mass. Dept. of Environmental Management

(DEM) protected rail corridor used for recreation. The ecologically sensitive land between the Nissitissit River and its confluence with the Nashua River is a focus of protection of activities because it is flood plain and ideal wildlife habitat. Section II contains "Estimated Habitats" of rare wetlands wildlife, so designated by the Mass. Natural Heritage Endangered Species Program.

C. Section 3: Squannacook Confluence Forest Legacy Area harbors the Squannacook River, one of the best trout streams in Eastern Mass. The Mass. Div. of Fisheries and Wildlife is focusing much of its limited economic resources here. The entire length of the river is listed in the Massachusetts "Atlas of Estimated Habitats of State-Listed Rare Wetland Wildlife". Additional purchases of conservation easements would help insure the protectiono f this scenic and sensitive area. Furthermore, it would help to complete the linkage between the protected Groton conservation land and DEM's J. Harry Rich State Forest. Section 3 protects the riparian forest and is part of the public water supply watershed for the town of Shirley. Also it is used extensively for recreation by the public.

E. Conservation Easements for tracts should address:

1. Development Rights.
2. Limited motorized access for trail construction and/or maintenance, wildlife habitat improvements and management of rights retained by owners.
3. Limited excavation of soil or minerals including sand and gravel.
4. Public access for passive recreation and to the river banks.
5. Possible acquisition of rights to protect the aesthetics of the FLA.
6. Possible acquisition of rights to practice forest management that enhances potable water and wildlife habitats.
7. Continuation of traditional forest and agricultural uses.
8. Protection of forested watershed.

IV. LIST OF PUBLIC BENEFITS TO BE DERIVED

A. Scenic Quality
B. Public Access for recreation.
C. Protection and conservation of fish and wildlife habitat.
D. Protection of public and private water supplies and recharge areas.
E. Continuation of traditional forest uses – extensive rather than intensive management.
F. Floodwater storage
G. Filtering of runoff to protect water quality.

V. IDENTIFICATION OF GOVERNMENTAL ENTITY OR ENTITIES THAT MAY BE ASSIGNED MANAGEMENT RESPONSIBILITY

A. U.S. Fish and Wildlife Service
B. Commonwealth of Massachusetts: Division of Forest and Parks; Division of Fisheries and Wildlife
C. Worcester and Middlesex Counties

D. Towns of:

Dunstable	Pepperell	Harvard
Groton	Lancaster	Shirley

VI. DOCUMENTATION OF THE ANALYSIS AND PUBLIC INVOLVEMENT PROCESS

A. Discussions and support of forest Legacy with the following groups:

1. Mass DEM – land acquisition staff and Div. of Forests and Parks
2. Nashua River Watershed Association
3. Greenway Committees for the towns of Dunstable, Pepperell, Groton and Lancaster
4. Mass. Div. of Fisheries and Wildlife
5. U.S. Fish and Wildlife Service
6. Fish and Wildlife Foundation (national)
7. Massachusetts Correctional Institution

B. Public support for the three Forest Legacy Sections shown by:

1. Acquisition by the Commonwealth of Massachusetts, Dept. of Environmental Management of: 506 acres as the J. Harry Rich State Forest and abutting 11 mile-long abandoned railroad bed as a recreation trail; 220 acres as the Lane-Cornerford Conservation Area.
2. Acquisition by the Commonwealth of Massachusetts, Division of Fisheries and Wildlife of: 725 acres as the Squannacook Wildlife Management Area; 923 acres as the Bolton Flats Wildlife Management Ara.
3. Acquisition by the U.S. Fish and Wildlife Service of the 662 acres as the Oxbow Wildlife Refuge. .
4. Presently there is active Congressional and local support to expand the Oxbow Wildlife Refuge by about 4,800 acres.
5. Acquisition of the Massachusetts Correctional Institution through a conservation easement of over one mile of riverbank trail.
6. Acquisition by the Town of Lancaster of 412 acres as the Cook Conservation Area.
7. Letter of Support from Governor William F. Weld.
8. Active congressional support by Congressman Chester Atkins that resulted in authorization of Forest Legacy funds to the State of in the FY 1992 Appropriations upon completion of the AON and approved by the U.S. Secretary of Agriculture.

C. Public Announcements

1. News article by Stan Feeman on "Fragmentation of forest land threatens quality of resources" in the Springfield Union-News, September 13, 1991, promotes woodland retention.
2. News article by Fred Contrada on "Forest preservation program may reverse state's loss of woodlands" in the Springfield Sunday Republican, January 5, 1992, talks about the Forest Legacy Program in Massachusetts.

3. Open space plans for the Greenway were developed by the Nashua River Watershed Association, local Greenway Committees and municipal Conservation Commissions with public input. The Greenway is named as a Conservation Goal in open space plans of the river communities of Fitchburg, Leominster, Lancaster, Clinton, Bolton, Harvard, Shirley, Groton and Pepperell.
4. The Nashua River Greenway management Plan was completed in 1984, and served as a basis for the designation of the Nashua River as a Community Scenic River. In order to attain this Scenic River status, it was necessary for the governing bodies of the riverfront communities to approve the goals for the Nashua River Greenway Management Plan. Local approval was gained through a series of public meetings held by the Selectmen of each river town.
5. Riverfront communities established local Greenway Committees that are official town bodies, approved by Selectmen. Greenway Committees conduct pubic meetings and publish an annual report.
6. Article, "Nashua River Greenway is Legacy Finalist" published in Nashua River Watershed Associations (NRWA) Spring 1992 newsletter, ("Watershed") talks about the Greenway being selected as a Massachusetts pilot Forest Legacy Area.
7. In updating its Management Plan for the Greenway during 1993, NRWA will solicit extensive public input by having the Greenway Committees conduct formal and informational hearings, informational meetings and write news releases.

D. The proposed Forest Legacy sections meet the eligibility criteria for a Forest Legacy Area as follows:

1. Forests are threatened by immediate and future conversions to non-forest, house lots.
2. Individual landowners have been approached about selling conservation easements and are interested in selling easements.
3. Scenic resources in all three units are recognized as distinctive.
4. Public has traditionally utilized the three areas for recreation and these are opportunities to extend the existing greenway systems.
5. Numerous private wells, six public water supply wells, and designated "zone 2" drinking water protection areas lie within the sections – protection of the water supply sources.
6. Riparian habitat for fish, waterfowl and migratory songbirds, and associated forested wetland plants and animals.
7. Contain rare and endangered flora and fauna.
8. Provide river access to all types of passive recreation including fishing.
9. Contain significant historic sites and potential sites of archeologic importance.
10. Have highly productive floodplain soils for forestry and agriculture.

D. Degree of Threat

1. The Nashua River watershed is surrounded by growing cities of Worcester, Lowell, Fitchburg/Leominster, and Nashua, New Hampshire. Relatively modest land and housing costs, coupled with an excellent highway system, also makes the watershed

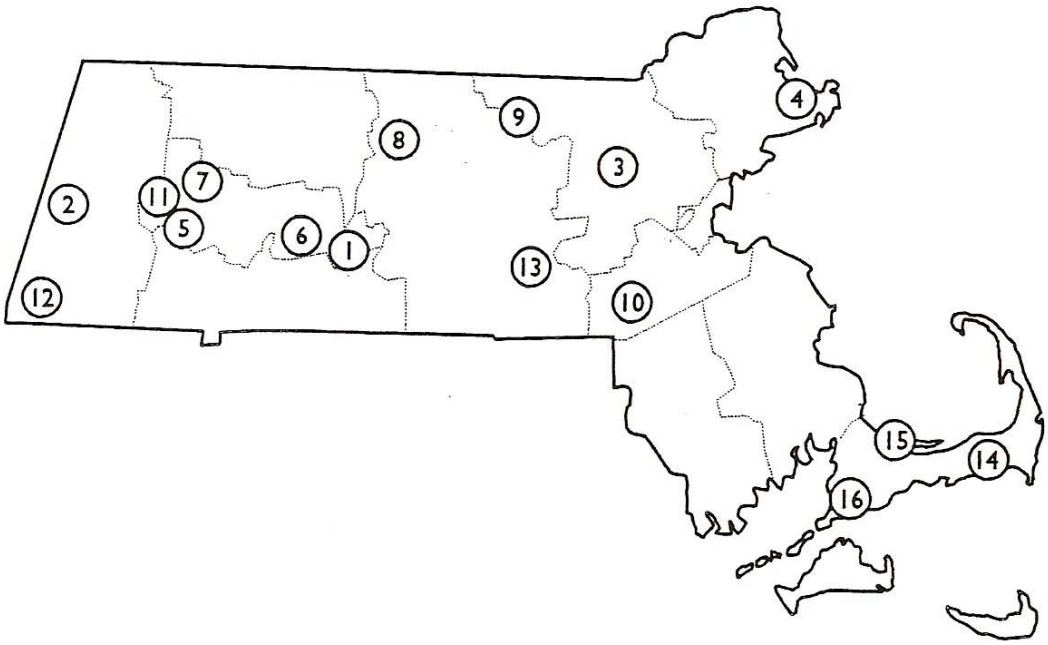
2. attractive to commuters to metropolitan Boston, only 30 miles away. The Nashua Valley is expected to experience accelerated urabanization in the 1990s.

No objections were received from the local communities and individuals following Congressional news releases, newspaper articles, public information meetings or when queried on establishing the three sections of the Nashua River Greenway as a Forest Legacy Area.

MAPS AND DESCRIPTIONS OF MASSACHUSERTTS FOREST LEGACY AREAS

Massachusetts

Forest Legacy Area Nominations



Legacy Area		Sponsor
Jabish Brook Watershed	1	Belchertown Conservation Commission
*Stockbridge Yokun Ridge Reserve	2	Berkshire County Land Trust
*Estabrook Woods	3	Concord Land Conservation Trust
Cape Ann Forest Legacy Area	4	Essex County Greenbelt Association
Kinne Brook Valley	5	Hilltown Land Trust
*Connecticut Valley Forest Legacy Area	6	MA Department of Environmental Management
East Branch, Westfield River	7	MA Department of Environmental Management
*North Quabbin Corridor	8	Mt. Grace Land Conservation Trust
*Nashua River Greenway	9	Nashua River Watershed Association
Charles River Area	10	New England Forestry Foundation
Westfield River	11	Pioneer Valley Planning commission
Mount Race / Jug End	12	Sheffield Land Trust
Cedar Swamp	13	Sudbury Valley Trustees
Punkhorn Parklands	14	Compact of Cape Cod Conservation Trusts
Lockout Ridge	15	Compact of Cape Cod Conservation Trusts
Pine Barrens / Quashnet River Woodlands	16	Compact of of Cape Cod Conservation Trusts

* Denotes Pilot Forest Legacy Areas

MASSACHUSETTS

DESCRIPTION: Stockbridge Yokun Ridge Forest Legacy Area Berkshire County

Beginning in the Town of Stockbridge at the Massachusetts Turnpike (I-90) underpass (bridge #319) of Route 12.

Thence, westerly along the Massachusetts Turnpike to the Route 102 overpass; a distance of 0.9 miles.

Thence, northerly along Lenox Street, crossing into the Town of Richmond, to Carey Corner and its junction with Swamp Road; a distance of 3.6 miles.

Thence, northerly along Swamp Road to Stevens Corner and its junction with Pittsfield Road; a distance of 2.0 miles.

Thence, north-easterly along Pittsfield Road and Barker Road, crossing the City of Pittsfield boundary line, to Barkerville and its junction with Tamarack Road; a distance of 2.1 miles.

Thence, easterly, then northerly along Tamarack Road to its junction with South Mountain Road; a distance of 2.4 miles.

Thence, easterly along South Mountain Road to its junction with Route 7 and 20; a distance of 0.5 miles.

Thence, southerly along Route 7 and 20 crossing into the Town of Lenox to its junction with Route 7A; a distance of 4.0 miles.

Thence, southerly along Route 7A to its junction with Greenwood Street; a distance of 0.8 miles.

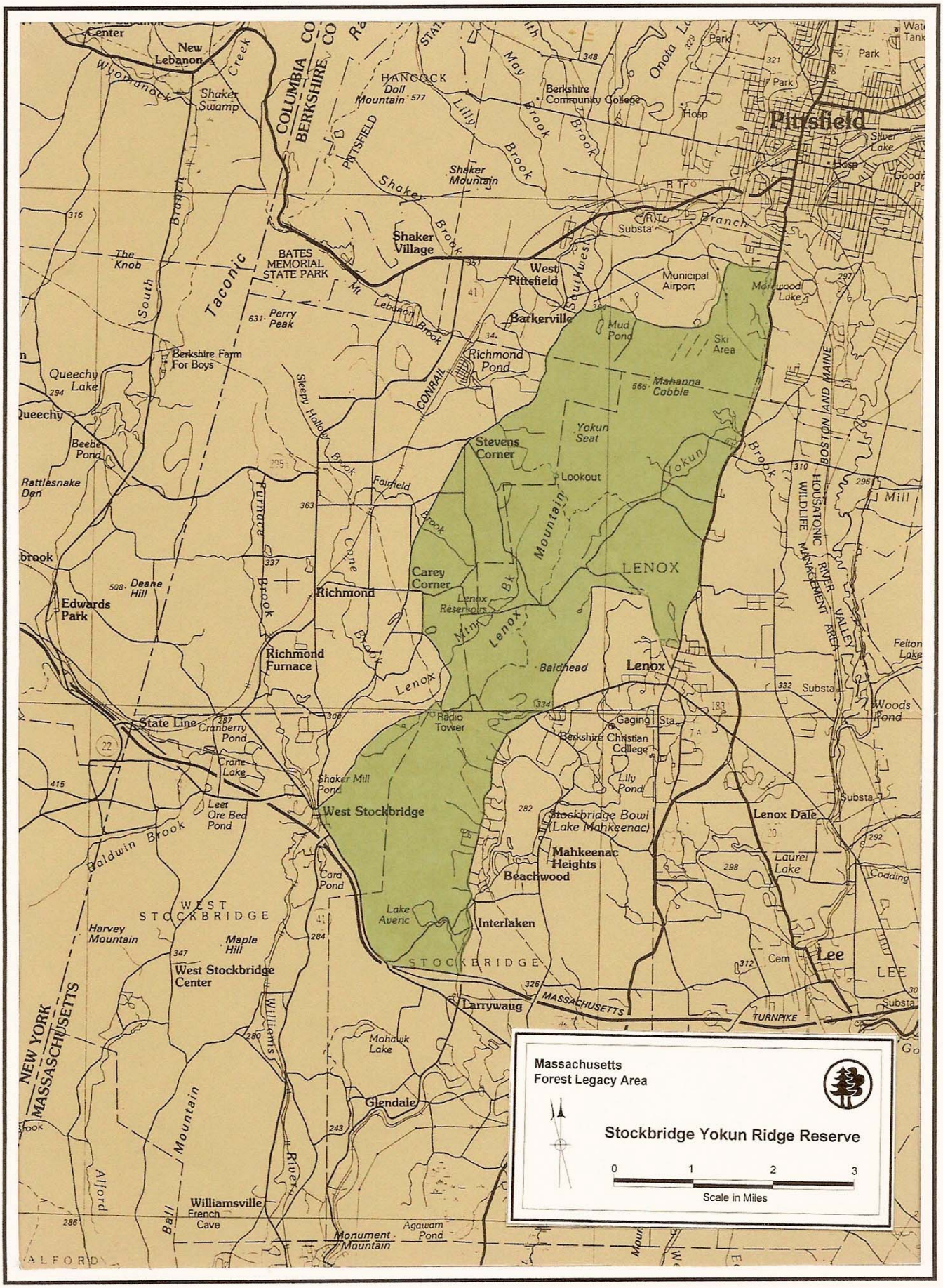
Thence westerly along Greenwood Street to its junction with Cliffwood Street; a distance of 0.1 miles.

Thence, westerly along and then southerly along Under Mountain Road to its junction with Route 183; a distance of 2.2 miles.

Thence, southerly along Route 183, crossing into the Town of Stockbridge, to the junction of the Massachusetts Turnpike (bridge #266); a distance of 2.5 miles.

Thence, westerly along the west-bound lane of the Massachusetts Turnpike to the point of beginning; a distance of 0.5 miles.

(USGS Quadrangles: Stockbridge and Pittsfield West)


Massachusetts
Forest Legacy Area
Stockbridge Yokun Ridge Reserve
0 1 2 3
Scale in Miles
Pittsfield
LENOX
Lenox
Lenox Dale
Richmond
Stockbridge
West Stockbridge
Lee
Williamsville
Glendale
Interlaken
Mahkeenac Heights
Beachwood
Barkerville
West Pittsfield
Yokun Seat
Lookout
Baldhead
Mudge Mountain
Monument Mountain
Mahanna Cobble
Richmond Pond
Lenox Reservoirs
Stockbridge Bowl (Lake Mahkeenac)
Shaker Village
Stevens Corner
Carey Corner
Richmond Furnace
West Stockbridge Center
Edwards Park
State Line
Berkshire Community College
Berkshire Christian College
Municipal Airport
Ski Area
Mud Pond
Laurel Lake
Woods Pond
Felton Lake
Morewood Lake
Silver Lake
Cranberry Pond
Crane Lake
Shaker Mill Pond
Leet Ore Bed Pond
Cara Pond
Lake Averic
Mohawk Lake
Agawam Pond
Lily Pond
Radio Tower
Gaging Sta.
Substa.
Cem
Hosp
Park
Tank
Harvey Mountain
Maple Hill
Mount Everett
Alford
Ball Mountain
Taconic
South Taconic
Shaker Mountain
Doll Mountain
Perry Peak
Deane Hill
The Knob
Rattlesnake Den
Beebe Pond
Queechy Lake
Queechy
Shaker Swamp
New Lebanon
Wyomanock Creek
Berkshire Farm For Boys
BATES MEMORIAL STATE PARK
HANCOCK
PITTSFIELD
COLUMBIA CO.
BERKSHIRE CO.
NEW YORK
MASSACHUSETTS
CONRAIL
Housatonic River
Housatonic River Valley Wildlife Management Area
Boston and Maine
Massachusetts Turnpike
Lilly Brook
Shaker Brook
Yokun Brook
Lenox Mtn.
Crane Brook
Furnace Brook
Fairfield Brook
Sleepy Hollow Brook
Baldwin Brook
Williams River
Mt. Lebanon Brook
May Brook
Onota Lake
Southwest Branch
Lenox Bk.
Lenox Mtn.
Loading
Cem
Substa.
Park
Hosp
Tank
ALFORD
LEE
STOCKBRIDGE
WEST STOCKBRIDGE

MASSACHUSETTS

DESCRIPTION: Estabrook Woods Forest Legacy Area

Beginning in the center of the town of Carlisle, Massachusetts at the intersection of Lowell Street and Route 225.

Thence, south-easterly along Route 225 to its junction with River road, a distance of 1.8 miles.

Thence, south-westerly along River Road, crossing the town line between the towns of Carlisle and Concord and into the town of Concord, at which point it becomes Monument Street, to its junction with Liberty Street, a distance of 3.6 miles.

Thence, southwesterly along Liberty Street to its junction with Barnes Hill Road, a distance of 0.2 miles.

Thence, north-westerly along Barnes Hill Road to its junction with Barrett's Mill Road and Lowell Street, a distance of 0.6 miles.

Thence, westerly along Barret's Mill Road to its junction with Strawberry Hill Road, a distance of 1.1 miles.

Thence, north-westerly along Strawberry Hill Road to its intersection with Pope Road, a distance of 1.0 miles.

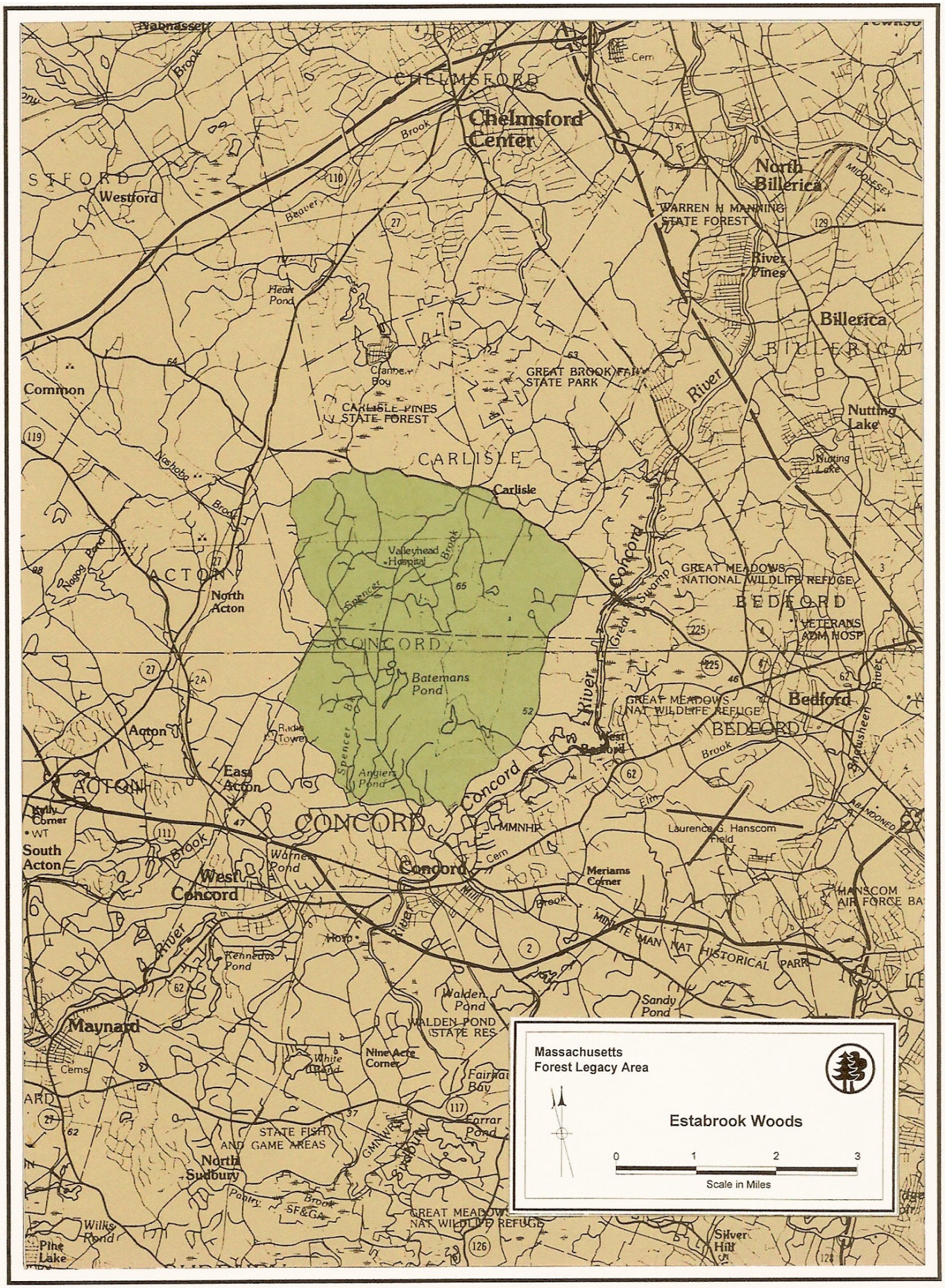
Thence, north-easterly along Pope Road to its intersection with West Street in the town of Carlisle, a distance of 0.1 miles.

Thence, northerly along West Street to its intersection with Acton Street, a distance of 1.6 miles.

Thence, easterly along Acton Street to its intersection with Route 225, a distance of 0.8 miles.

Thence, easterly along Route 225 to Carlisle center, its junction with Lowell Street and the point of beginning, a distance of 1.4 miles.

(USGS Quadrangles: Billerica and Maynard)


Massachusetts
Forest Legacy Area
Estabrook Woods
0 1 2 3
Scale in Miles
CHELMSFORD
Chelmsford Center
North Billerica
WARREN H MANNING STATE FOREST
River Pines
Billerica
BILLERICA
Westford
Common
GREAT BROOK FARM STATE PARK
CARLISLE PINES STATE FOREST
CARLISLE
Carlisle
Nutting Lake
Concord River
GREAT MEADOWS NATIONAL WILDLIFE REFUGE
BEDFORD
VETERANS ADM HOSP
ACTON
North Acton
Valleyhead Hospital
Batemans Pond
Spencer Brook
Ridge Tower
Angiers Pond
Acton
East Acton
West Acton
Bedford
CONCORD
Concord
Laurence G Hanscom Field
HANSCOM AIR FORCE BA
South Acton
West Concord
Warner Pond
Meriams Corner
MINUTE MAN NAT HISTORICAL PARK
Kennedys Pond
Maynard
Walden Pond
WALDEN POND STATE RES
Sandy Pond
Nine Acre Corner
Fairhaven Bay
Farrar Pond
STATE FISH AND GAME AREAS
North Sudbury
GREAT MEADOWS NAT WILDLIFE REFUGE
Silver Hill
Pine Lake
Wilks Pond
Heart Pond
Nashoba Brook
Nagog Pond
Beaver Brook
Elm Brook
Abandoned

D-6

MASSACHUSETTS

DESCRIPTION: Connecticut Valley Forest Legacy Area Western Valley Subunit

Beginning at a point at the junction of the county line between Franklin and Hampshire Counties and Pantry Road in the town of Hatfield, MA.

Thence, southerly along Pantry Road to its intersection with Route 5 and 10; a distance of 1.5 miles.

Thence, southerly along Route 5 and 10 to the village of West Hatfield; a distance of 1.5 miles.

Thence, north-westerly on Linseed Road, to its junction with Cole's Meadow Road; a distance of 0.4 miles.

Thence, southerly and westerly along Cole's Meadow Road to its intersection with Route 5 and 10; a distance of 1.8 miles.

Thence, southerly on 5 and 10 to its intersection with Hatfield Street; a distance of 0.8 miles

Thence, southerly and westerly on Hatfield Street to its intersection with Bridge Road; a distance of 0.6 miles.

Thence, westerly on Bridge Road to its intersection with North Farms Road; a distance of 1.1 miles.

Thence, northerly on North Farms Road to its junction with Mountain Street; a distance of 3.2 miles.

Thence, northerly on Mountain Street to its intersection with the Franklin-Hampshire County line; a distance of 1.8 miles.

Thence, easterly along the county line to the point of beginning; a distance of 2.1 m iles.

(USGS Quadrangles: Williamsburg and Easthampton)

DESCRIPTION: Connecticut Valley Forest Legacy area Holyoke Range Subunit

Beginning at the point at the junction of Bay Road and Route 116 in the tow of Amherst, Massachusetts;

Thence, south along Route 116 to the point known as Moody Corner and the junction with Pearl Street; a distance of 3.6 miles.

Thence, westerly on Pearl Street to the intersection with Route 47; a distance of 1.8 miles.

Thence, westerly and northerly along Route 47 to the town line between Hadley and South Hadley; a distance of 0.6 miles.

Thence, easterly along said town line to the center of the Connecticut River; a distance of 0.4 miles.

Thence, northerly along the town line in the Center of the Connecticut River to the confluence of the Fort River and the Connecticut River; a distance of 3.6 miles.

Thence, easterly and northerly upstream along the Fort River to a point where it crosses Bay Road; a distance of 0.8 miles.

Thence, southerly along Bay Road to its intersection with Hockanum Road; a distance of 0.1 miles.

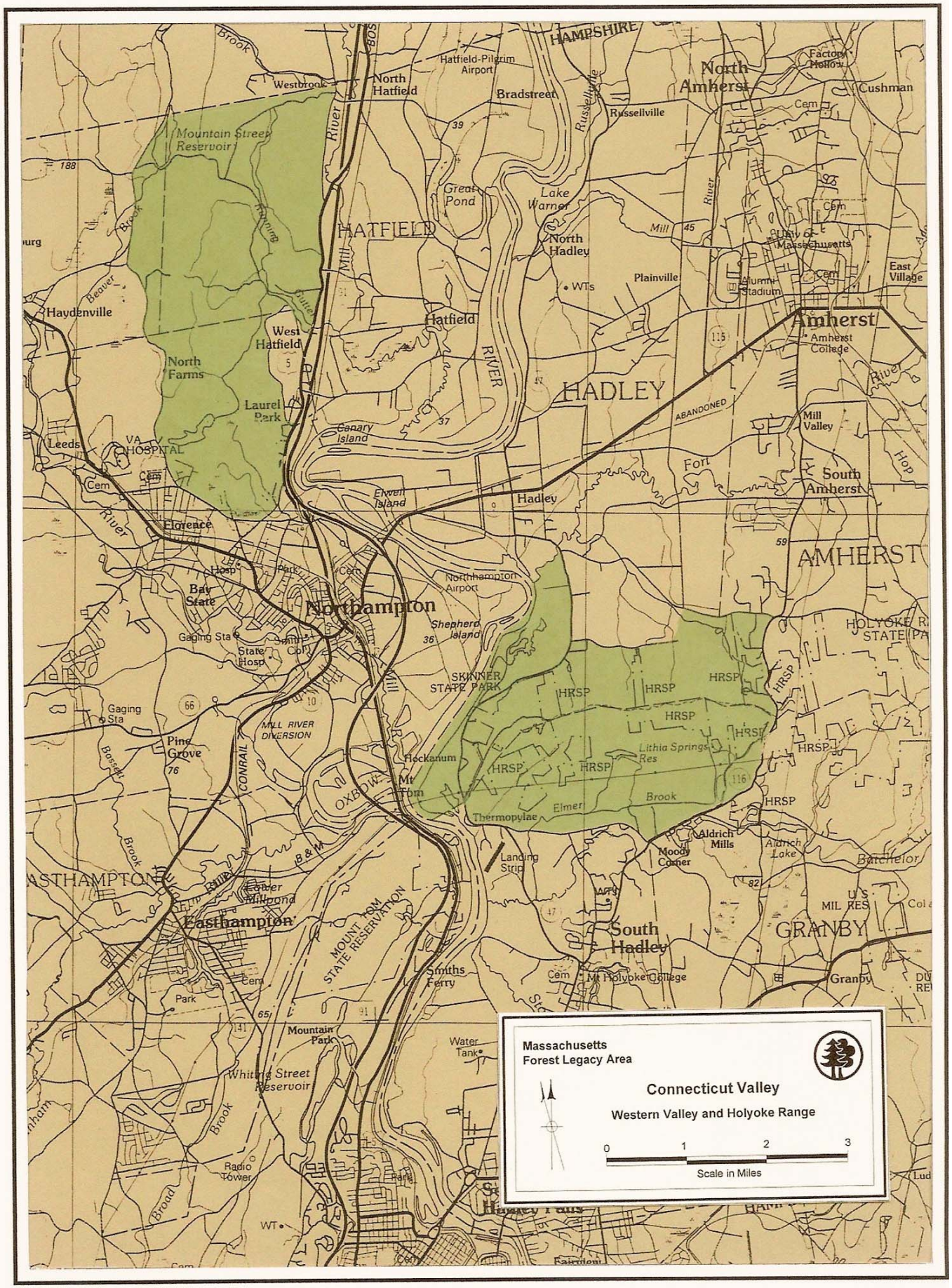
Thence, southerly along Hockanum Road to its intersection with Chmura Road; a distance of 1.2 miles.

Thence, easterly along Chmura Road to its end at a cul-de-sac; a distance of 1.2 miles.

Thence, northerly along a line from the cul-de-sac to the intersection of Maple Street and Bay Road; a distance of 0.4 miles.

Thence, easterly along Bay Road to the point of beginning; a distance of 1.1 miles.

(USGS Quadrangle: Mt. Holyoke)


Massachusetts
Forest Legacy Area
Connecticut Valley
Western Valley and Holyoke Range
0 1 2 3
Scale in Miles
HATFIELD
HADLEY
AMHERST
Northampton
Easthampton
South Hadley
GRANBY
North Amherst
Amherst
Hatfield
North Hatfield
West Hatfield
Haydenville
Florence
Leeds
Bay State
Hospital
Northampton Airport
Hatfield-Pilgrim Airport
Bradstreet
Russellville
North Hadley
Plainville
Hadley
South Amherst
Mill Valley
East Village
Cushman
Factory Hollow
Aldrich Mills
Moody Corner
Smiths Ferry
Mt Holyoke College
Granby
Mountain Street Reservoir
Whiting Street Reservoir
Great Pond
Lake Warner
Canary Island
Elwell Island
Shepherd Island
Skinner State Park
Mt Tom
Hockanum
Thermopylae
Lithia Springs Res
Aldrich Lake
Batchelor Brook
Mill River Diversion
Oxbow
Mount Tom State Reservation
Pine Grove
Mountain Park
Water Tank
Radio Tower
Landing Strip
Gaging Sta
Gaging Sta
Conrail
B & M
Abandoned
Fort
HRSP
Connecticut River
Mill River
Broad Brook
Beaver Brook
Running Gutter Brook
Bashett Brook
Elmer Brook
Mill River
Hop Brook
Plumb Stadium
U S MIL RES
Cem
Park
WTs
WT
Col
Lud

MASSACHUSETTS

DESCRIPTION: North Quabbin Corridor Forest Legacy Area – Phase 1

Beginning at the intersection of Route 2 and South Athol Road in the town of Athol, Massachusetts;

Thence, easterly along Route 2 to the intersection in Phillipston Four Corners of Route 2 and its junction with Route 2A; a distance of 6.3 miles.

Thence, southerly along Route 2A to its intersection with Baldwinville Road; a distance of 0.2 miles.

Thence, easterly along Baldwinville Road to the center of Phillipston; a distance of 1.4 miles.

Thence, southerly along Barre Road to its intersection with Searle Hill Road; a distance of 0.2 miles.

Thence, southerly along Searle Hill Road to its intersection with Route 101; a distance of 1.2 miles.

Thence, south-westerly along Route 101 to its intersection with Route 32; a distance of 3.6 miles.

Thence, southerly on Route 32 to its intersection with West Street in Petersham Center; a distance of 1.1 miles.

Thence, westerly along West Street to its intersection with Hardwick Road; a distance of 0.4 miles.

Thence, south on Hardwick Road, crossing Route 122 and continuing southerly on Hardwick Road (also known as Route 32A) to its intersection with Dugway Road; a distance of 1.6 miles.

Thence, westerly along Dugway Road to its intersection with power lines; a distance of 1.2 miles.

Thence, north-westerly along the power line to its junction with Blackington Road; a distance of 4.0 miles.

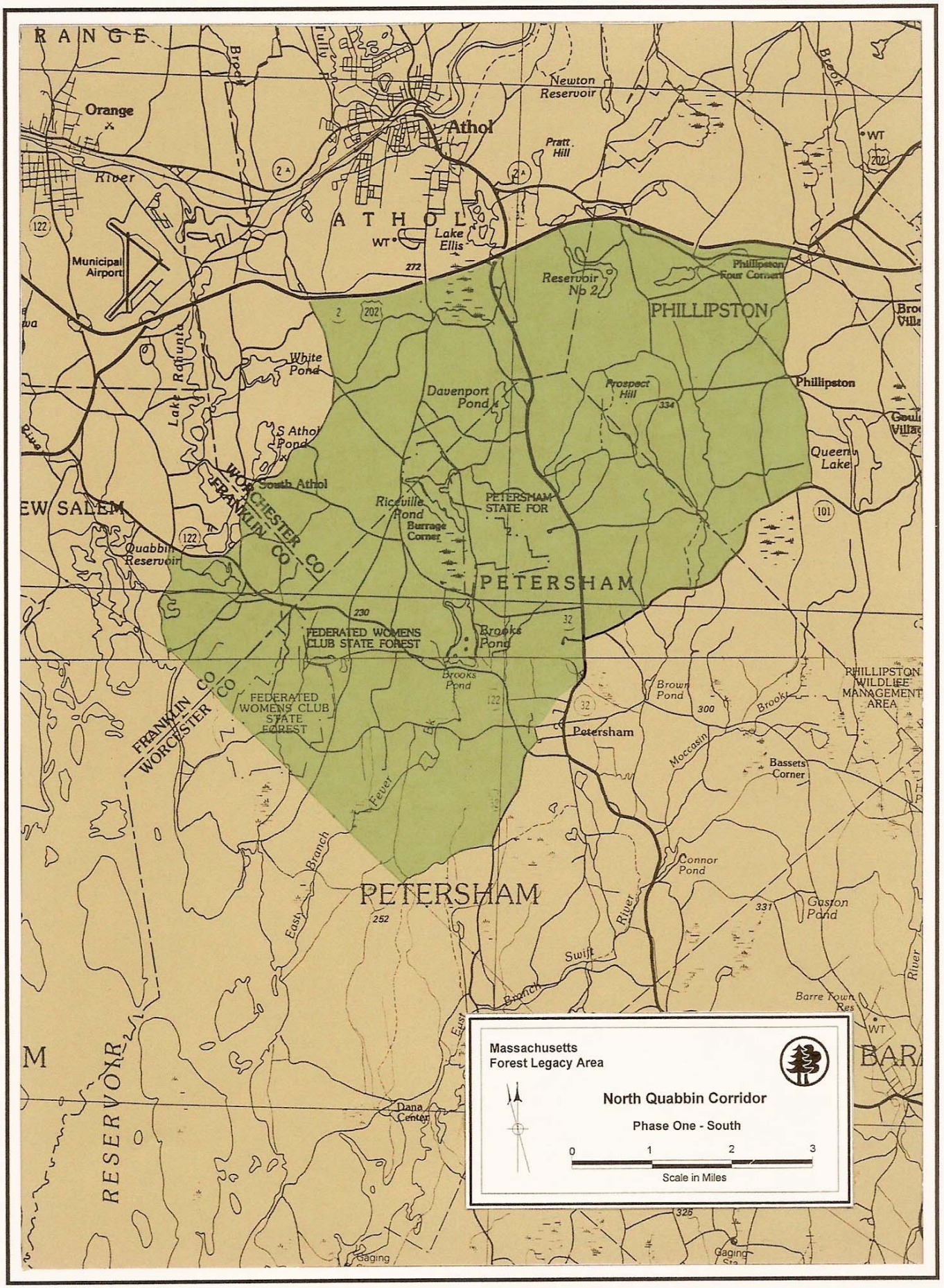
Thence, northerly along Blackington Road to the junction with Route 122; a distance of 1.5 miles.

Thence, easterly along Route 122 to its junction with Rice Road; a distance of 0.6 miles.

Thence, north-easterly along Rice Road to its junction with South Athol Road; a distance of 0.3 miles.

Thence, northerly along South Athol Road to its junction with Route 2 and the point of beginning; a distance of 3.5 miles.

(USGS Quadrangles: Athol, Barre, Orange and Shutesbury)


Massachusetts
Forest Legacy Area
North Quabbin Corridor
Phase One - South
0 1 2 3
Scale in Miles
Athol
Orange
Newton Reservoir
Pratt Hill
Municipal Airport
Lake Ellis
Reservoir No 2
Phillipston Four Corners
PHILLIPSTON
White Pond
Davenport Pond
Prospect Hill
Phillipston
Queen Lake
S Athol Pond
South Athol
Riceville Pond
Burrage Corner
PETERSHAM STATE FOR
Quabbin Reservoir
PETERSHAM
FEDERATED WOMENS CLUB STATE FOREST
Brooks Pond
Brown Pond
PHILLIPSTON WILDLIFE MANAGEMENT AREA
Petersham
Bassets Corner
Connor Pond
Gaston Pond
Barre Town Res
Dana Center
WORCESTER CO
FRANKLIN CO

MASSACHUSETTS

DESCRIPTION: North Quabbin Corridor Forest Legacy Area – Phase 1

Beginning at the intersection of Old Winchester Road and the New Hampshire and Massachusetts state line, in the town of Warwick, Massachusetts.

Thence, easterly along the MA/NH State line, along the northern border of the towns of Warwick, Royalston, and Winchendon to the Intersection of the state line and Tarbell Brook in the town of Winchendon; a distance of 13.3 miles.

Thence, southerly along Tarbell Brook to its intersection with the Millers River; a distance of 2.4 miles

Thence, southerly along the Millers River to its intersection with the Otter River; a distance of 5.2 miles.

Thence, southerly along the Otter River to its intersection with Route 202 in Baldwinville; a distance of 3.4 miles.

Thence, southerly along Route 202 to its intersection with Route 2 in Phillipston Four Corners; a distance of 3.7 miles.

Thence, westerly along Route 2 to its intersection with Route 32; a distance of 3.8 miles.

Thence, northerly along Route 32 through parts of the town of Athol, crossing the Millers River, to its intersection with Chestnut Hill Avenue; a distance of 2.4 miles.

Thence, north-easterly along Chestnut Hill Avenue to its intersection with Old Keene Road; a distance of 0.5 miles.

Thence, northerly along Old Keen Road to its intersection with Adams Drive; a distance of 1.0 miles.

Thence, westerly on Adams Drive to its intersection with Route 32 (Silver Lake Street); a distance of 0.4 miles.

Thence, southerly along Route 32 to its intersection with Pinedale Street; a distance of 0.1 miles.

Thence, westerly along Pinedale Street to its intersection with Tully Road; a distance of 0.6 miles.

Thence, northerly along Tully Road to its intersection with the east branch of the Tully River and the Franklin-Worcester county line, beging one and the same; a distance of 0.1 miles.

Thence, westerly along the county line and the east branch of the Tully River, through the intersection of the west branch and the east branch, and continuing along the county line to its intersection with Lower Road; a distance of 0.5 miles.

Thence, northerly along Lower Road to its intersection with Athol Road; a distance of 0.8 miles.

Thence, northerly along Athol Road to the village of North Orange; a distance of 1.0 miles.

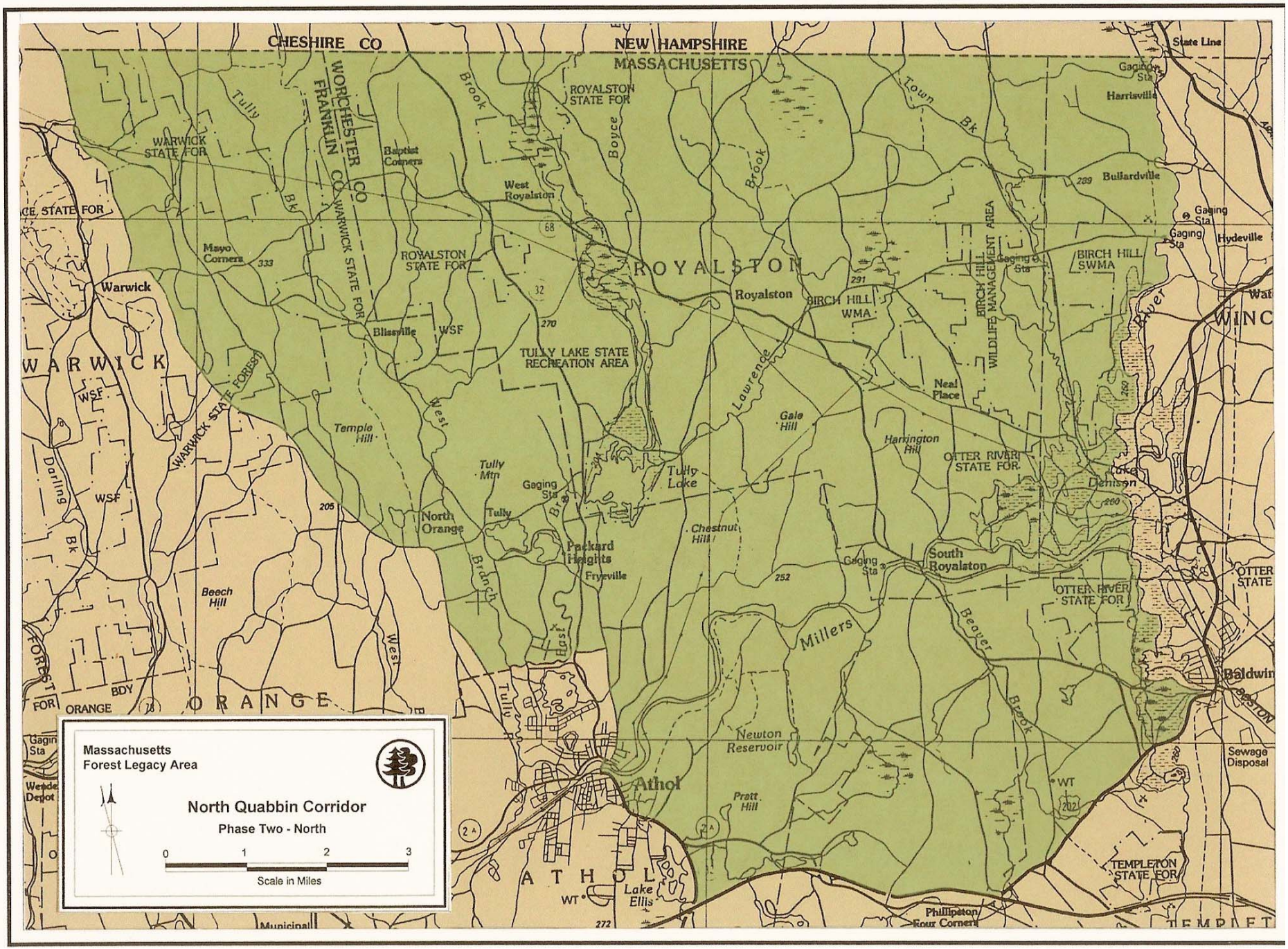
Thence, north-westerly along North Orange Road to its intersection with the Gale Road, at the town line between Orange and Warwick; a distance of 2.4 miles.

Thence, northerly along the Gale road to its intersection with the Athol Road; a distance of 2.5 miles.

Thence, westerly along the Athol Road to its intersection with the Old Winchester Road; a distance of 0.4 miles.

Thence, northerly along the Old Winchester Road to the point of beginning; a distance of 2.9 miles.

(USGS Quadrangles: Athol, Orange, Northfield and Winchendon)


CHESHIRE CO
NEW HAMPSHIRE
MASSACHUSETTS
WORCHESTER CO
FRANKLIN CO
WARWICK STATE FOR
ROYALSTON STATE FOR
ROYALSTON
WARWICK
ORANGE
ATHOL
Warwick
Royalston
Baptist Corners
West Royalston
Mayo Corners
Blissville
WSF
TULLY LAKE STATE RECREATION AREA
BIRCH HILL WMA
BIRCH HILL SWMA
BIRCH HILL WILDLIFE MANAGEMENT AREA
OTTER RIVER STATE FOR
Bullardville
Hydeville
Harrisville
State Line
Neal Place
Gale Hill
Harrington Hill
Temple Hill
Tully Mtn
Tully Lake
Chestnut Hill
North Orange
Packard Heights
Fryeville
South Royalston
Beech Hill
Millers
Newton Reservoir
Pratt Hill
Lake Ellis
Lake Denison
Baldwin
Sewage Disposal
TEMPLETON STATE FOR
Phillipston Four Corners
Tully
Darling Bk
Town Bk
Bouce Brook
Lawrence Brook
Beaver Brook
Branch
Gaging Sta
WT
Municipal
Massachusetts
Forest Legacy Area
North Quabbin Corridor
Phase Two - North
0 1 2 3
Scale in Miles

D-12

MASSACHUSETTS

DESCRIPTION: Nashua River Greenway Forest Legacy Area

Section 1: North Nashua/Cook Conservation Forest Legacy Area

Beginning in the Town of Lancaster, Massachusetts at the intersection of Route 70 (Lunenberg Road) and Route 117 (North Main Street).

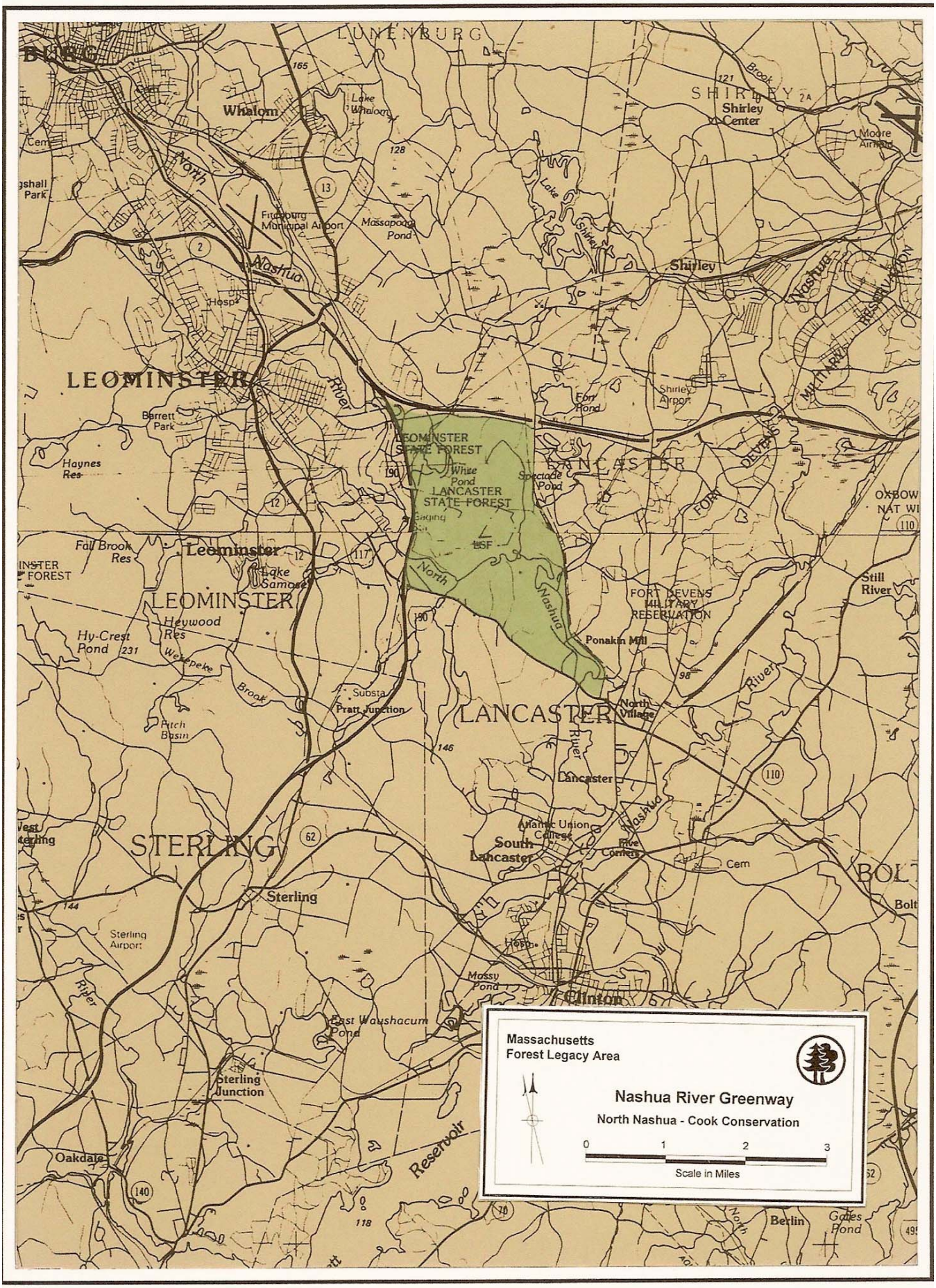
Thence, north-westerly along Route 117 to its junction with Interstate Route 190; a distance of 2.8 miles.

Thence, northerly along Route I-190 crossing into the Town of Leominster to its junction with route 2; a distance of 2.0 miles.

Thence, easterly along Route 2 to its intersection with Route 70; a distance of 1.6 miles.

Thence, southerly along Route 70 to its intersection with Route 117 at the point of beginning; a distance of 3.6 miles.

(USGS Quadrangles: Hudson and Ayer)


LUNENBURG
SHIRLEY
Shirley Center
Whalom
Lake Whalom
Fitchburg Municipal Airport
Massapoag Pond
Lake Shirley
Shirley
Moore Airfield
Nashua River
LEOMINSTER
Barrett Park
Haynes Res
Fall Brook Res
Leominster
Lake Samoset
Heywood Res
Hy-Crest Pond
Wekepeke Brook
Pitch Basin
Substa
Pratt Junction
LEOMINSTER STATE FOREST
White Pond
LANCASTER STATE FOREST
Spectacle Pond
Fort Pond
Shirley Arpor
LANCASTER
FORT DEVENS MILITARY RESERVATION
Ponakin Mill
North Village
Lancaster
Atlantic Union College
South Lancaster
Five Corners
Still River
OXBOW NAT WI
STERLING
Sterling
Sterling Airport
Massy Pond
Clinton
East Waushacum Pond
Sterling Junction
Oakdale
Reservoir
Berlin
Gates Pond
Massachusetts
Forest Legacy Area
Nashua River Greenway
North Nashua - Cook Conservation
0 1 2 3
Scale in Miles

MASSACHUSETTS

DESCRIPTION: Nashua River Greenway Forest Legacy Area

Section 2: Pepperell-Dunstable Forest Legacy Area

Beginning in the Town of Pepperell, Massachusetts at the junction of the east bank of the Nashua River and the Massachusetts-New Hampshire border.

Thence, crossing the Nashua River easterly along the Massachusetts-New Hampshire border to the junction with the Boston and Maine railroad tracks in the Town of Dunstable; a distance of 0.1 miles.

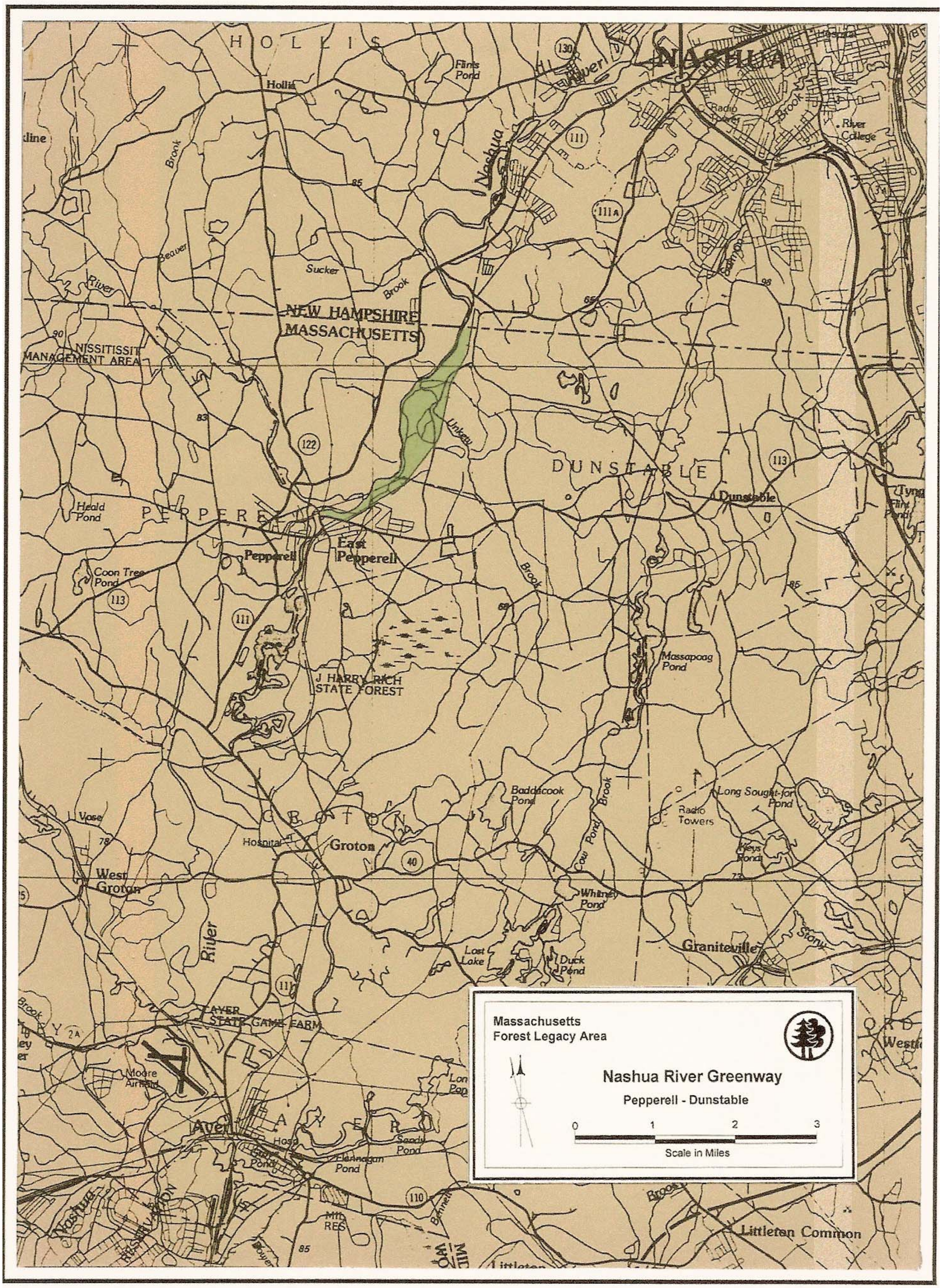
Thence, south-westerly along the Boston & Maine railroad tracks to their junction with Route 113; a distance of 2.9 miles.

Thence, westerly along Route 113 to its intersection with Groton Street in the Village of East Pepperell; a distance of 0.2 miles.

Thence, northerly along Groton Street to its junction with the east bank of the Nashua River at the covered bridge; a distance of 0.1 miles.

Thence, northerly and easterly along the east bank of the Nashua River in the Town of Pepperell to the point of beginning; a distance of 3.3 miles.

(USGS Quadrangle: Townsend)



Massachusetts
Forest Legacy Area
Nashua River Greenway
Pepperell - Dunstable
0
1
2
3
Scale in Miles
HOLLIS
Hollis
NASHUA
Flints Pond
River College
NEW HAMPSHIRE
MASSACHUSETTS
NISSITISSIT MANAGEMENT AREA
Sucker Brook
Beaver
River
Nashua
Unkety
DUNSTABLE
Dunstable
Heald Pond
PEPPERELL
Pepperell
East Pepperell
Coon Tree Pond
J HARRY RICH STATE FOREST
Massapoag Pond
Baddacook Pond
Long Sought-for Pond
Radio Towers
Keys Ponds
GROTON
Groton
Hospital
West Groton
Vose
Cow Pond Brook
Whitney Pond
Graniteville
Lost Lake
Duck Pond
AYER STATE GAME FARM
Moore Airfield
Ayer
Sandy Pond
Flannagan Pond
Littleton Common

MASSACHUSETTS

DESCRIPTION: Nashua River Greenway Forest Legacy Area

Section 3: Squannacook Confluence Legacy Area

Beginning in the Town of Ayer, Massachusetts at the intersection of Route 2A and the west bank of the Nashua River.

Thence, northerly along the west bank of the Nashua River to its confluence with the Squannacook River; a distance of 0.2 miles.

Thence, north-westerly along the east bank of the Squannacook River to its intersection with Route 225 in the Village of West Groton; a distance of 2.4 miles.

Thence, easterly along Route 225 to its intersection with Hill Road; a distance of 1.4 miles.

Thence, north-westerly along Hill Road to its intersection with Maple Avenue; a distance of 0.7 miles.

Thence, northerly along Maple Avenue to its intersection with Pepperell Road; a distance of 0.9 miles.

Thence, northerly along Pepperell Road to its junction with Fitchs Bridge Road; a distance of 0.3 miles.

Thence, easterly along Fitchs Bridge Road to its intersection with Gratuity Road; a distance of 0.4 miles.

Thence, south-easterly along Gratuity Road to its junction with Mill Street in the Village of Groton; a distance of 1.1 miles.

Thence, southerly along Mill Street to its junction with Route 111; a distance of 0.9 miles.

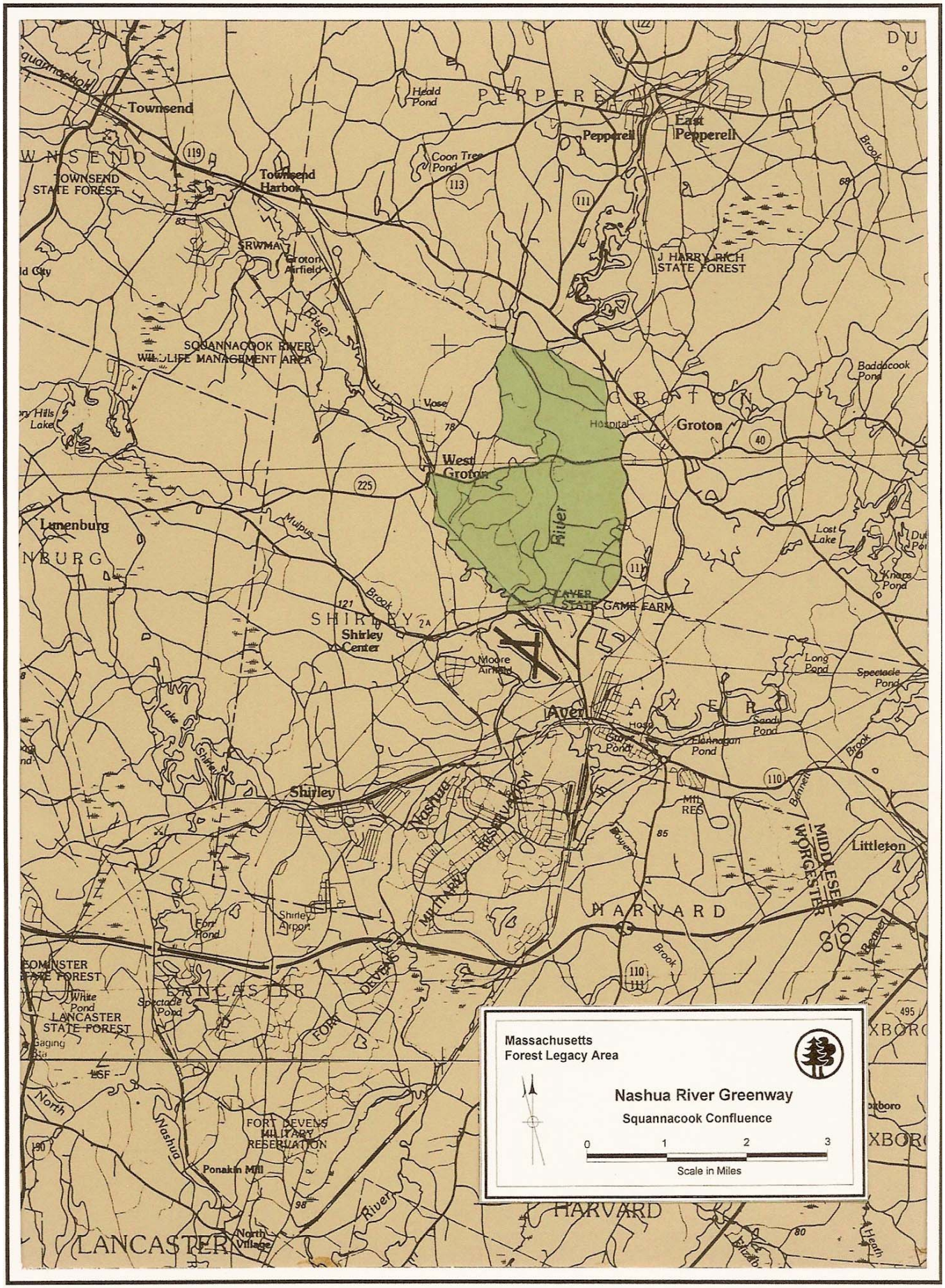
Thence, southerly along Route 111 to its intersection with Groton-Shirley Road; a distance of 2.2 miles.

Thence, westerly along Gronton-Sherley Road to its intersectionwith Route 2A; a distance of 1.0 miles.

Thence, easterly along Route 2A; a distance of 1.0 miles.

Thence, easterly along Route 2A to the west bank of the Nashua River in the Town of Groton and the point of beginning; a distance of 0.1 miles.

(USGS: Quadrangle: Ayer)


Massachusetts
Forest Legacy Area
Nashua River Greenway
Squannacook Confluence
0 1 2 3
Scale in Miles
Townsend
Townsend Harbor
Pepperell
East Pepperell
Groton
West Groton
Shirley
Shirley Center
Ayer
Harvard
Littleton
Lancaster
Lunenburg
TOWNSEND STATE FOREST
SQUANNACOOK RIVER WILDLIFE MANAGEMENT AREA
J HARRY RICH STATE FOREST
LAYER STATE GAME FARM
LANCASTER STATE FOREST
FORT DEVENS MILITARY RESERVATION
Groton Airfield
Moore Airfield
Shirley Airport
Ponakin Mill
North Village
Nashua River
Squannacook River
Heald Pond
Coon Tree Pond
Baddacook Pond
Lost Lake
Long Pond
Spectacle Pond
Sandy Pond
Fort Pond
White Pond
Mulpus Brook
MIDDLESEX WORCESTER CO

LETTERS OF AUTHORIZATION

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
STATE HOUSE • BOSTON 02133

WILLIAM F. WELD
GOVERNOR

ARGEO PAUL CELLUCCI
LIEUTENANT-GOVERNOR

October 3, 1991

Mr. Michael Rains, Director
Northeast Area State & Private Forestry
USDA Forest Service
5 Radnor Corporate Center
100 Matsonford Rd.
Radnor, PA 19087

Dear Mr. Rains,

I am writing in response to a request to name a lead agency to cooperate with the U.S.D.A. Forest Service on the Forest Legacy Program in Massachusetts.

I am designating the Department of Environmental Management's, Bureau of Forest Development as the lead agency for this project. The Bureau is headed by Chief Forester Warren Archey who will serve as the principal contact for the Legacy program in the Commonwealth.

I am excited about the potential of this program to provide new means for the protection of critical forest lands in the Commonwealth, and look forward to its successful implementation.

Sincerely,

Bill Weld

William F. Weld
Governor

cc: Peter Webber, Commissioner DEM
Warren Archey, Chief Forester

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Management

P. O. Box 155
Clinton
Massachusetts
01510
(508) 368-0126

Division of Forests & Parks
Region 3

TO: Massachusetts Stewardship Committee

Enclosed please find minutes of August 27, 1991 Stewardship Coordinating Committee Meeting.

Next Stewardship Committee Meeting
September 26th, 1991 at Aurburn Rink at 9:30

Other Meetings
5 Year Plan Revision Subcommittee Meeting
September 16th, 1991 at the Auburn Rink, 9:30 a. m.

Forest Legacy Program - overview of new Forest Service Program by Tom Quink, Forest Legacy Coordinator, Subcommittee will be established to propose "Legacy Areas" throughout Massachusetts. No money available to purchase "rights" from willing landowners for this current year.

Land Trust Association in Massachusetts will meet with T. Quink to discuss Forest Legacy Program.

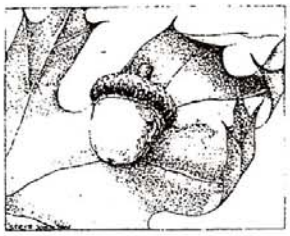
SIP Report - Chairman Bob Lear explained that some of the SIP Practices for Massachusetts will be ready for full Stewardship Committee review by September 26th.

5 Year Plan - Chairperson S. Cambell handed out a progress report. The 5 Year Plan subcommittees' timeline for the next few months and next year were discussed along with the idea of training sessions for resource professionals.

Mike Fleming informed the committee of an upcoming Stewardship Video conference February 15th, 1992. One site for viewing will probably be at Univ. of Massachusetts Amherst. Contact Dave Kittredge.

The Idea of a Full Time Stewardship Coordinator position was discussed. Hugh Putnam suggested that Mike Fleming spend as much time as possible on the program. Mike explained that some of his workload will be reassigned to other Bureau of Forestry Personnel.

LD/erm



Massachusetts Forest Stewardship Program
463 West Street Amherst, MA 01002
phone: 413-256-1201 FAX: 413-253-4375
a program of DEM-Division of Forests & Parks, with funds from USDA-Forest Service

May 12, 1993

Mr. Allen Schacht, Director
USDA-Forest Service
NE Area State & Private Forestry
5 Radnor Corporate Center
100 Matsonford Road, Suite 200
Radnor, PA 19087

Dear Mr. Schacht,

On behalf of the Statewide Stewardship Coordinating Committee, I am very pleased to submit Massachusetts' Needs Assessment for its Forest Legacy Program. The Committee, and its Forest Legacy Task Force, have reviewed and enthusiastically accepted the assessment.

We are proud that the Forest Legacy Task Force, an appointed subcommittee of the Statewide Stewardship Coordinating Committee, could bring its expertise together quickly and skillfully to produce this document, the first completed in the country. The ease and cooperation with which it accomplished this task truly speaks to our State's track record in land protection work and ability to work together to formulate common goals and land protection strategies to be employed in the Forest Legacy Program.

We are eager to begin the task of assembling these Legacy Areas and look forward to receiving approval of the final Needs Assessment document shortly.

Sincerely,

Susan M. Campbell

Susan M. Campbell
Statewide Stewardship Steering Committee Chair
Forest Legacy Task Force Member

cc: John Currier, Warren Archey, Tom Quink

in cooperation with

Mass. Association of Professional Foresters Mass. State Forestry Committee Mass. Forestry Assoc.
Mass. Wood Producers Assoc. Mass. Tree Farm Committee Mass. Christmas Tree Assoc. Mass. Maple Producers Assoc.
The Trustees of Reservations New England Forestry Foundation Berkshire-Pioneer RC&D Pilgrim RC&D
Mass. Division of Fisheries & Wildlife Mass. Assoc. of Conservation Districts Mass. Commission on Soil, Water & Related Resources
University of Mass.-Cooperative Extension System USDA-Soil Conservation Service USDA-Agricultural Stabilization & Conservation Service